

**BATHAEE DUNNE LLP**

YAVAR BATHAEE (CA 282388)

yavar@bathaeedunne.com

EDWARD M. GRAUMAN (*pro hac vice*)

egrauman@bathaeedunne.com

445 Park Ave. 9th Floor

New York, NY 10022

(332) 205-7668

BRIAN J. DUNNE (CA 275689)

bdunne@bathaeedunne.com

653 West Fifth Street, 26th Floor

Los Angeles, CA 90071

(213) 462-2772

*Attorneys for Plaintiffs*

**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN JOSE DIVISION**

REVEAL CHAT HOLDCO LLC, a  
Delaware limited liability company, USA  
TECHNOLOGY AND MANAGEMENT  
SERVICES, INC. (d/b/a Lenddo USA), a  
Delaware corporation, and BEEHIVE  
BIOMETRIC, INC., a dissolved  
Delaware corporation, on behalf of  
themselves and all others similarly  
situated,

Plaintiffs,

v.

FACEBOOK, INC., a Delaware  
corporation,

Defendant.

Case No. 5:20-cv-00363-BLF

**AMENDED CLASS ACTION COMPLAINT**

Jury Trial Demanded

**TABLE OF CONTENTS**

INTRODUCTION .....	1
PARTIES .....	6
I.    PLAINTIFFS .....	6
A.    Reveal Chat / LikeBright .....	6
B.    Lenddo .....	8
C.    Beehive Biometric .....	11
II.   DEFENDANT .....	14
JURISDICTION AND VENUE .....	16
FACTS .....	16
I.    FACEBOOK EMERGES AS THE DOMINANT SOCIAL NETWORK .....	16
A.    The Last Social Network Standing .....	16
B.    A New Market of Its Own Creation .....	19
C.    The Social Data Barrier to Entry .....	21
D.    Google’s Failed Entry into the Social Data Market.....	23
II.   A THREAT TO FACEBOOK’S MONOPOLY: THE RISE OF SMARTPHONES AND MOBILE APPS .....	26
A.    The Mobile App Revolution .....	26
B.    Facebook Recognizes the Looming Threat Presented by Mobile Applications.....	30
C.    The Facebook Platform .....	32
D.    The Profitable Open Graph Platform and Mobile Install Business .....	35
III.  FACEBOOK WEAPONIZES ITS PLATFORM TO DESTROY COMPETITION .....	37
A.    Facebook Makes Plans to Remove Vital Friends and News Feed APIs and Refuses to Sell Social Data to Competing Application Developers .....	37
B.    Facebook’s Social-Data Heist .....	40

**TABLE OF CONTENTS***(continued)*

C.	Facebook Targets Its Competitors for Reciprocity or Denial of API Access .....	45
D.	The Decision to Remove Developer Access to the Friends, News Feed and Other Crucial APIs Lacked Any Legitimate Justification .....	48
E.	Facebook Prepares to Announce Removal of the APIs .....	54
F.	The Announcement at F8 .....	58
IV.	THE WHITELIST AND DATA SHARING AGREEMENTS .....	59
V.	THE SURVEILLANCE AND ACQUISITION OF COMPETITIVE THREATS .....	62
A.	Facebook Relies on Onavo’s Surveillance of Facebook’s Competitors, and Acquires and Uses Onavo’s Assets .....	63
B.	Facebook Identifies Instagram as a Threat and Acquires the Company .....	68
C.	Facebook Acquires WhatsApp .....	74
VI.	THE RELEVANT MARKETS .....	79
A.	The Social Data Market .....	80
B.	The Social Advertising Market .....	87
C.	Barriers to Entry .....	95
D.	Relevant Geographic Markets .....	97
VII.	HARM TO COMPETITION AND ANTITRUST INJURY .....	98
	CONCEALMENT AND TOLLING .....	103
A.	Facebook Made False Statements About the Availability of the API Functionality and Omitted from Those Statements that Facebook Had Internally Decided to Remove the APIs .....	103
B.	Facebook and Its Employees Maintained a Code of Silence about the APIs and the Scheme in the Face of a Duty to Speak .....	108
C.	Facebook Lied to Developers About the Reasons for the Purported Removal, Offering False, Misleading, and Pretextual Reasons Instead of the Truth .....	109

**TABLE OF CONTENTS**

*(continued)*

D.	Plaintiffs Exercised Reasonable Diligence with Respect to their Claims .....	114
CLASS ACTION ALLEGATIONS .....		115
CLAIMS FOR RELIEF .....		120
PRAYER FOR RELIEF .....		122
JURY DEMAND .....		123

1. Plaintiffs allege the following on behalf of themselves and others similarly situated on information and belief based on the review of only public documents and information.<sup>1</sup>

# INTRODUCTION

2. By the end of 2010, after Facebook had emerged the victor among social networks such as MySpace and Friendster, Facebook faced a new threat from smartphones. Mobile applications on smartphones for the first time allowed users to access the internet from any location, on user interfaces controlled by touch, providing a distinct experience from desktop or laptop computers. Special-purpose apps designed specifically for smartphones and smartphone web browsers could not only access the Internet, but also users' address books—a ready-made, proto-social network from which apps could draw.

3. As Facebook rapidly approached its initial public offering in 2012, it found itself behind on mobile platforms, with its own mobile products fledgling. That is when, according to internal Facebook documents, Facebook's founder and CEO, Mark Zuckerberg, as well as Facebook's most senior executives, hatched and executed a plan to (a) neutralize any potential competition from tens of thousands of mobile and mobile-friendly web applications built using Facebook's Platform, and (b) to conscript a subset of developers on its Platform into maintaining Facebook's stronghold over social data and bootstrapping Facebook's NEKO mobile advertising product.

4. For years, Facebook had told developers that they could safely build their applications—and their entire businesses—on Facebook’s Platform, which gave developers access through application programming interfaces (“APIs”) to the functionality of Facebook’s social

<sup>1</sup> All references to internal Facebook documents are exclusively to those published by news organizations and other public sources, particularly NBC News. As of the date of this complaint, NBC's documents were available at <https://dataviz.nbcnews.com/projects/20191104-facebook-leaked-documents/assets/facebook-sealed-exhibits.pdf>; and <https://dataviz.nbcnews.com/projects/20191104-facebook-leaked-documents/assets/facebook-exhibits.pdf>.

1 network as well as information about Facebook users' friends and extended network, users'  
2 interactions with each other, and users' newsfeed posts. This access was the central value  
3 proposition of Facebook's Platform. If developers built apps that enhanced the value of Facebook's  
4 social network, they would in return receive the benefits of access to the functionality of  
5 Facebook's social network, as well as to interconnections and interactions among Facebook's  
6 users—Facebook's social graph.

7 5. Zuckerberg and his senior-most lieutenants devised a scheme in 2012 that would  
8 ensure Facebook's rapid dominance among social advertisers, particularly on mobile platforms,  
9 and among those who accessed, generated, and monetized social data (the sort of data collected  
10 from large networks of interacting users):

- 11 • Facebook would plan the withdrawal of the most important APIs on its Platform,  
12 particularly those APIs that allowed developers to access and manipulate social  
13 data from Facebook's social graph.
- 14 • Facebook would keep its plans secret, all the while continuing to encourage and  
15 incentivize developers to build for the Facebook Platform.
- 16 • As developers' apps succeeded, Facebook attempted to coopt them with  
17 agreements to continue using important Platform APIs in exchange for those apps'  
18 own users' social data or for large purchases of advertising through Facebook's  
19 NEKO platform.
- 20 • If, after Facebook's routine internal audits, which relied on Onavo spyware to spy  
21 on users, an app was deemed too competitive with Facebook's current or planned  
22 products, Facebook would shut down their access to critical APIs, including the  
23 Friends, News Feed API, and certain Messaging APIs (the "Core APIs"). Certain  
24 apps that were not dependent on Facebook's Platform, such as Instagram and  
25 WhatsApp, would be acquired.

1           6.       Facebook executed this scheme from at least September 2012 through April 2015,  
2 and when the scheme ended, it left 40,000 destroyed apps in its wake. Plaintiffs' apps and  
3 companies were among them.

4           7.       The effect of the scheme was harm to competition in two relevant markets. First,  
5 Facebook maintained and advanced its market power and monopoly over the Social Data  
6 Market<sup>2</sup>—the market in which social data, which is data concerning interactions and relationships  
7 among networks of users, is acquired, processed, and monetized. It is this sort of data that allows  
8 machine-learning algorithms, such as those used at Facebook, to predict the extent to which  
9 content and advertising will propagate through a network of users.

10          8.       Second, by destroying apps that enhanced the value of Facebook's Platform, an  
11 entirely irrational thing to do but for the long-term effect of excluding rivals that monetized,  
12 consumed, and generated social data, Facebook obtained dominance in the Social Advertising  
13 Market—dominance that has allowed Facebook to consistently raise prices for years with little or  
14 no competitive check.

15          9.       While Plaintiffs in this action were competitors, consumers, and actual or potential  
16 rivals of Facebook in the Social Data Market from which they were excluded, their injury was also  
17 the necessary means—the instrumentality—by which Facebook obtained and maintained its  
18 powerful monopoly in the Social Advertising Market.

19          10.       Facebook's decision to destroy 40,000 apps on its Platform was also a substantial  
20 profit sacrifice but for its scheme. The developers on Facebook's Platform purchased advertising  
21 from Facebook in order to obtain new users for their apps. By eliminating the developers from its  
22 platform, Facebook eliminated a large part of the customer base for its advertisement business,  
23 which makes no rational sense but for the existence of its overall scheme. Moreover, Facebook  
24 had devised a plan to charge for API access but forwent that profitable option as well. Even more  
25

---

26                   <sup>2</sup> Defined terms are set forth elsewhere in the body of the Complaint.  
27

1 telling, Facebook refused to even offer exemptions to most of the 40,000 apps it destroyed, let  
2 alone on the same terms it offered to the many app developers that Facebook had hand selected  
3 for continued access to its Platform after April 30, 2015. As Michael Vernal, Facebook's VP of  
4 Engineering for Platform, explained to Samuel Lessin, then Facebook's VP of Product  
5 Management, in August of 2012 as they planned and executed the scheme, Facebook would "not  
6 allow things which are at all competitive to 'buy' this data from us."

7 11. In addition, internal Facebook documents from those in charge of Facebook's APIs,  
8 including its engineers, make clear that Facebook's decision lacked any legitimate technical or  
9 business justification. Facebook's Platform engineer, Bryan Klimt, for example, wrote to Ilya  
10 Sukhar, Facebook's Head of Developer Products, in August 2013 that the rumored reasons for the  
11 withdrawal were "pabulum designed to make engineers think this decision has solid technical  
12 reasons"; the purported justification that the removal was meant to avoid "abuse[]" was "False";  
13 any claim that there were alternatives to the APIs were also "False" and none of "those reasons  
14 explains why we are doing this," because Facebook was "doing this as a protectionist grab to make  
15 sure no one else can make a competing social network by bootstrapping with our social graph."

16 12. Sukhar recounted that he had been speaking to dozens of developers "who will get  
17 totally fucked by this and it won't even be for the right reason." He also noted that his "engineers  
18 think the plan is insane," and he refused to even "support an all hands [meeting] to convince them  
19 otherwise." These are just a few of the contemporaneous statements by Facebook's own  
20 executives, which are set forth in more detail in this Complaint. They confirm that Facebook  
21 removed the APIs for anticompetitive reasons. All else was pretext.

22 13. In April 2014, at the Facebook F8 developer conference, Facebook misleadingly  
23 folded the announcement that the Core APIs would be removed as part of an announcement  
24 surrounding Facebook's Login feature—an obfuscation strategy Sukhar internally referred to as  
25 the "switcharoo plan." The premise of the announcement was to enhance user control over their  
26 data. The event was mostly about Login, but Facebook quietly announced the potential  
27



1 depreciation of the Core APIs in a change log and falsely stated only that Facebook would be  
2 removing “rarely used” APIs. By April 30, 2015 the next year, Facebook had removed the Core  
3 APIs, but offered them to handpicked developers who bought advertising from Facebook or fed  
4 back their users’ social data to Facebook. Facebook refused to grant exemptions to 40,000  
5 developers, including Plaintiffs, let alone on the terms it offered other developers it had  
6 individually selected for survival.

7 14. Facebook continued to mislead developers as to the reasons for the withdrawal,  
8 pointing them to documentation, including a “Frequently Asked Questions” page, that suggested  
9 that the removal of the APIs was to safeguard user privacy. The ruse succeeded, and despite  
10 Plaintiffs and others in the putative class seeking exemptions from the decision, Plaintiffs and  
11 many in the putative class ultimately gave up on their businesses and business models, and  
12 accepted the pretextual explanation they were given by Facebook and by Facebook’s postings,  
13 documentation, and guidance, namely that the APIs were removed for legitimate reasons,  
14 particularly user privacy and control.

15 15. Facebook reiterated the pretextual user control and privacy rationale every time it  
16 referred back to the decision to remove the Friends and News Feed APIs as part of subsequent  
17 announcements of Platform changes. The pretextual rationale worked, preventing Plaintiffs and  
18 members of the putative class from discovering the truth—that the APIs were removed after a  
19 competitive audit of apps and as part of a scheme lasting several years.

20 16. Even when a subset of the internal documents ultimately released by NBC News in  
21 late 2019 were released in 2018 by the UK parliament, Facebook put out a misleading blog post,  
22 again suggesting that its decision was motivated by user privacy concerns. That was all pretext,  
23 and when the entire trove of documents was published in November 2019, Facebook could no  
24 longer conceal what it had done. The documents themselves, many of which are recounted in this  
25 Complaint, make clear that Facebook’s decision to withdraw the APIs as to Plaintiffs and the class  
26 was for anticipative reasons.



1           24.     In late 2014, prior to the purported removal of the Friends, News Feed and other  
2 APIs from Facebook's Platform, LikeBright began receiving unusable and inconstant information  
3 from Facebook's APIs. LikeBright learned that Facebook had slated the Core APIs for removal  
4 and was forcing LikeBright to upgrade to the next version of Facebook's Platform APIs.

5           25.     In 2015, LikeBright contacted Facebook to determine if there was a way forward.  
6 Facebook referred LikeBright to its official policy documents and developer documentation, which  
7 suggested that the APIs were being removed for user control and privacy reasons.

8           26.     LikeBright then contacted acquaintances that worked at Facebook to get more  
9 clarity as to the APIs and to determine whether LikeBright could obtain an exemption from the  
10 decision. They were met with terse e-mails and referred again to Facebook's public statements and  
11 documentation, which suggested that the APIs were being removed due to user control and privacy  
12 concerns.

13           27.     LikeBright never obtained the exemption it sought and ultimately accepted  
14 Facebook's explanation that the changes were part of a broader policy decision concerning user  
15 control and privacy. Indeed, LikeBright reviewed Facebook statements, developer releases, and  
16 other announcements, including in 2015 after the purported removal of the APIs, and was led to  
17 believe that the APIs were withdrawn due to user privacy concerns.

18           28.     At no point did Facebook tell LikeBright the truth—that the APIs had been slated  
19 for withdrawal years in advance and that their withdrawal as to LikeBright and thousands of other  
20 apps was for competitive, not legitimate reasons.

21           29.     LikeBright changed its business to focus on messaging and became Reveal Chat.  
22 That business ultimately failed by the end of 2015. Without Facebook's social data, LikeBright  
23 simply could not function as a dating app that matched users based on their mutual interests and  
24 commonalities among their social media profiles.

25           30.     LikeBright continued to exercise diligence. Indeed, LikeBright, particularly one of  
26 its founders, reviewed Facebook's blog post in December 2018 responding to documents released  
27

1 by the UK Parliament, and was again misled into believing that Facebook had removed the APIs  
2 due to user privacy and control concerns. There was not a single inkling that the removal was part  
3 of a pre-meditated scheme spanning several years.

4 31. Despite having exercised substantial diligence, including by contacting Facebook,  
5 speaking to other developers, and reading Facebook's releases and blog posts regarding its  
6 Platform, LikeBright / Reveal Chat did not—and could not—learn of the true reasons for  
7 Facebook's removal of the APIs until November 6, 2019 when internal Facebook documents were  
8 publicly released.

9 **B. Lenddo**

10 32. Plaintiff USA Technology and Management Services, Inc. (d/b/a Lenddo USA)  
11 (and together with its affiliates, referred to herein as "Lenddo") is a Delaware corporation with its  
12 principal place of business in New York, New York. Its mission was to increase financial inclusion  
13 with a focus on using social data as a source of risk management, allowing the extension of credit  
14 and financial services in the emerging markets.

15 33. In 2010, Lenddo began work on a technical proof of concept for its primary product,  
16 which relied on Facebook data provided with the consent of users to assess their creditworthiness.  
17 The premise of the product was based on studies showing that a person's network of associations  
18 is predictive as to credit risk, fraud, and likelihood of loan repayment.

19 34. After successfully creating its prototype, Lenddo launched its business in 2011 and  
20 drew heavily on Facebook's social graph. Lenddo's mobile app relied on several Facebook  
21 Platform APIs, including the Core APIs, as well as the Messaging APIs.

22 35. Lenddo's app also measured information voluntarily provided by users through  
23 their mobile phones, including information about the usage and location of their mobile device.

24 36. The Facebook information was a key part of Lenddo's business, as social data  
25 derived from the user's connections and interactions with other users, was predictive of the success  
26 of a loan made to them, as well as a powerful tool for confirming identity and avoiding fraud. This  
27

1 credit scoring and fraud management data was critical for servicing the billions of people in  
2 emerging markets who lack traditional credit scores or identity documentation. For example, users  
3 that shared connections with other users that had repaid loans were lower credit risks. Conversely,  
4 users with threshold numbers of high-risk users in their network posed an increase chance of failing  
5 to repay a loan made to them.

6 37. Information about a user's network was also predictive of fraud risk, as users with  
7 deep and diverse connections were less likely to be perpetrators of fraud.

8 38. On January 12, 2012, Lenddo filed for a patent on its algorithm, which issued on  
9 April 8, 2014, as U.S. Patent No. 8,694,401 B2. The patent was for an algorithm that calculated a  
10 "credit score based on available personal and data gathered from the online social footprint," and  
11 determined the "borrower's propensity to pay an owed amount." The patented algorithm in part  
12 scores users' credit risk by observing "endorsements or negative behavior of individuals in a  
13 borrower's social network."

14 39. Lenddo's business model was based on consuming social data from Facebook's  
15 social graph, as well as the social data obtained through its own app, and then making loans, usually  
16 with approximately 9-month terms, based on that data for a profit. All of the data was voluntarily  
17 provided by users as a condition of their request for a loan.

18 40. Lenddo was accordingly a participant, including a competitor and consumer, in the  
19 Social Data Market described in this Complaint, as it not only consumed social data from  
20 Facebook's Platform, but profited by making loans from harvesting insight from social data,  
21 including social data collected through its own mobile app.

22 41. The first phase of Lenddo's business required the collection of data not just about  
23 loans that were likely to be repaid, but about the characteristics of loans that were likely to default.  
24 After initially spending millions providing loans to riskier borrowers (many in developing  
25 countries around the world with underserved populations) in order to harvest default data, Lenddo  
26 began to scale its business by limiting the loans it made to users that were predicted to repay them.

1           42.     Lenddo built its business on Facebook after repeated representations by Facebook  
2     that the Platform would be viable, and Lenddo's employees, including its developers, attended  
3     several Facebook developer events, including Facebook F8 developer conferences, where  
4     Facebook touted over a period of years the power and stability of its Platform. Facebook also  
5     provided Lenddo's developers with documentation about its Platform and its APIs, including  
6     videos and other content, through its developer portal.

7           43.     In 2015, Facebook suggested to Lenddo that it would be limiting access to certain  
8     abusers of the Platform. It was not until April 2015, however, that Lenddo learned that Facebook  
9     was eliminating the Core APIs and the Messaging APIs as to all users that were not given  
10    exemptions.

11          44.     On April 23, 2015, Lenddo entered a developer ticket, seeking to obtain an  
12    exemption from the new policy. Lenddo pleaded its case with Facebook, explaining that its app  
13    required developer consent and was subject to regulatory controls in the countries in which it  
14    extended credit.

15          45.     Lenddo continued discussions with Facebook's Neil Hiltz, who asked a series of  
16    questions about the app, including about the regulatory oversight of its lending business.

17          46.     On May 6, 2020, Lenddo spoke with Facebook's Simon Cross, who advised that  
18    the app could not have access to the Core APIs and the Messaging APIs because the app was  
19    credit-related and was part of a business that provided credit.

20          47.     Facebook's statements were false and misleading and made material omissions. At  
21    no point did Facebook disclose, as described below, that the APIs had been slated for removal  
22    years prior for competitive reasons. Nor did Facebook disclose that other businesses that extended  
23    credit, such as the Royal Bank of Canada, had in fact obtained exemptions after having purchased  
24    large amounts of advertising through Facebook's NEKO mobile advertising platform.

1           48.     After speaking with other developers, reviewing documentation by Facebook, and  
2 speaking to other acquaintances at Facebook, Lenddo concluded that Facebook’s policy change  
3 was for legitimate reasons.

4           49.     Lenddo’s business immediately suffered. The company searched for other social  
5 data sources, none of which were remotely robust enough to provide the same level of insight into  
6 a borrower’s credit risk as data derived from Facebook’s social graph. Indeed, Lenddo turned to  
7 Android, Yahoo, and Google’s Gmail platform, but did not find a data source with the same level  
8 of robustness and predictive value as Facebook’s social data.

9           50.     Lenddo ultimately transitioned its business to a Software-as-a-Service product for  
10 lending. That is, in 2015, Lenddo first made available to third parties its proprietary data scoring  
11 system and began offering identity verification services.

12           51.     Although the company continues to operate today, Facebooks removal of the APIs  
13 for anticompetitive reasons destroyed its substantial investment in Facebook’s Platform and social  
14 data graph. Facebook’s decision concerning the Core and Messaging APIs also foreclosed Lenddo  
15 from scaling its lending business based on the social data it was built from the ground up to  
16 consume.

17           52.     Despite having exercised substantial diligence, including by contacting Facebook,  
18 speaking to other developers, and reading Facebook’s releases regarding its Platform, Lenddo did  
19 not—and could not—learn of the true reasons for Facebook’s removal of the APIs until 2019 when  
20 internal Facebook documents were publicly released.

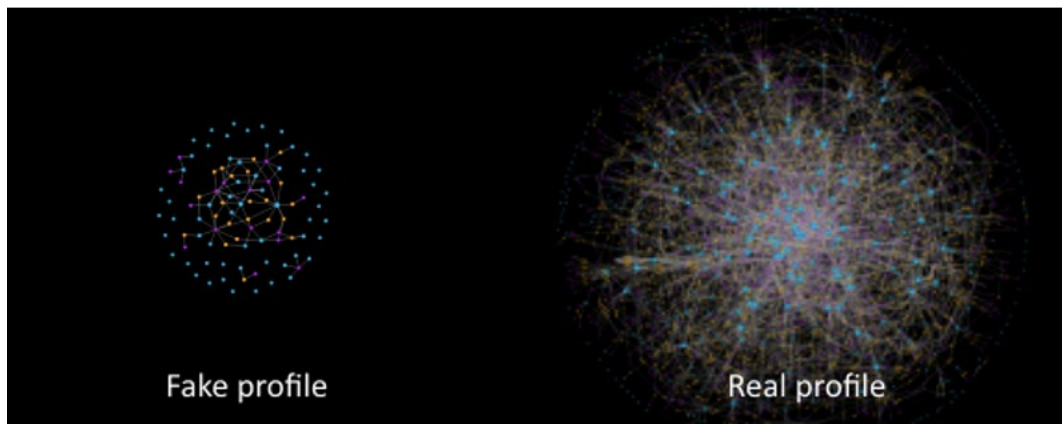
21           **C.     Beehive Biometric**

22           53.     Plaintiff Beehive Biometric, Inc. (a/k/a Beehive ID) (“Beehive”) is a dissolved  
23 Delaware corporation formerly headquartered in Austin, Texas. Plaintiff Beehive’s claims are  
24 brought by and through Mary Haskett, who has been appointed as a receiver by the Delaware Court  
25 of Chancery pursuant to 8 Del. C. § 279 for purposes of pursuing Beehive’s claims in this action.  
26  
27  
28

1           54.     Beehive began in 2013 as Facebook's social network was still nascent. Facebook  
2     had evangelized its Platform to developers to induce them to build apps for Facebook's social  
3     network. Facebook's statements led Beehive to believe that Facebook would make its Platform an  
4     open one that developers could build entire businesses upon.

5           55.     That is precisely what Beehive did. Beehive had devised an algorithm that would  
6     analyze a user's social connections and interactions to determine whether the individual's  
7     identification was authentic. Beehive would analyze the connections among users and their friends,  
8     as well as the nature and quality of their interactions. That analysis, however, did not read the  
9     actual content of any user's posts or any of the user's personal information.

10          56.     Beehive had determined that fake Facebook accounts and real ones were starkly  
11     different when analyzed. Indeed, to fake an authentic Facebook account would require a  
12     combinatorically impossible number of second and third order connections in the social graph—  
13     connections that would have to persist or exist over time. In other words, it was virtually impossible  
14     for a Facebook user to fake the sort of connections that authentic users maintained as a matter of  
15     normal usage. Beehive was thus able to determine whether a Facebook user was a real person.



23          57.     Beehive had raised venture capital and had developed its app in part through the  
24     TechStars startup accelerator program. Its business model was to authenticate user identities using  
25     their Facebook accounts. Thus, Beehive could serve as a form of identity verification for third-  
26     party sites by providing a numerical score.



1           58.     Beehive deployed its product to dating sites, and as a result, the dating sites saw  
2     immediate increases in reliability of users on their platforms and a significant drop in fraud risk,  
3     including credit card chargebacks. Beehive's business model was to charge third parties for its  
4     authentication services.

5           59.     Beehive thus participated in the Social Data Market described below, including as  
6     a competitor and consumer of social data. Beehive's authentication system generated social data  
7     concerning user authenticity by consuming social data from Facebook, and Beehive monetized the  
8     social data it consumed, processed, and generated by selling authenticity information to third  
9     parties.

10          60.     Beehive's business was halted in 2015 when it discovered that Facebook was  
11     removing the APIs, including the Friends and News Feed APIs, that Beehive's business depended  
12     on for its functionality. Facebook had apparently buried the announcement that the APIs, which  
13     were a significant part of Facebook's Platform were purportedly being removed. Beehive was  
14     accordingly surprised when it learned in 2015 that the APIs were being removed.

15          61.     By the time Facebook purported to remove the Core APIs, Beehive had sought  
16     answers. Beehive sought an exemption from Facebook but received no answer. Beehive then  
17     contacted an acquaintance that worked at Facebook, who advised them that they would never  
18     receive an exemption.

19          62.     After April 2015, Beehive and its employees learned through Facebook's posts  
20     online that Facebook had removed the APIs in order to protect user privacy and user data. Although  
21     Beehive's business had been severely impacted by the decision, it accepted the explanation as  
22     truthful. Facebook never disclosed to them that they had slated the APIs for destruction years  
23     prior—in fact, the APIs were slated for removal with respect to thousands of apps approximately  
24     a year or more before Beehive was induced into building its business on the Facebook Platform in  
25     2013.

63. Beehive spoke to other developers, read documentation by Facebook, and viewed developer message boards. None of the sources provided any explanation other than the one Facebook had offered—that the APIs were being removed for user privacy reasons. And none of those materials even hinted that Facebook had slated the APIs for removal years in advance for competitive reasons.

64. Beehive then searched for other sources of social data to fuel its product, including from Twitter and LinkedIn. None of those networks were deep or robust enough to provide the same indicia of user authenticity. Beehive’s business ultimately failed when it could not find a reasonable substitute for social data.

65. Despite having exercised substantial diligence, including by contacting Facebook, speaking to other developers, and reading Facebook’s releases regarding its Platform, Beehive did not—and could not—learn of the true reasons for Facebook’s removal of the APIs until 2019 when internal Facebook documents were publicly released.

## II. DEFENDANT

66. Defendant Facebook, Inc. (“Facebook”) is a publicly traded company, incorporated in Delaware. Facebook’s principal place of business and headquarters is located at 1601 Willow Road in Menlo Park, California.

67. Founded in 2004 by Mark Zuckerberg, Facebook is a social media company that provides online services to two billion users around the world. In exchange for providing services, Facebook collects user data, which it uses to create and sell targeted advertising services. Facebook’s principal revenue is from targeted social media advertising that it provides to advertisers as a data broker.

68. Facebook also operates as a platform for third-party applications and hardware, and owns and operates several business divisions:

- Facebook. Facebook’s core application, which bears the company’s name, is, according to Facebook’s filing with shareholders, designed to enable “people to

connect, share, discover, and communicate with each other on mobile devices and personal computers.” The Facebook core product contains a “News Feed” that displays an algorithmically ranked series of stories and advertisements individualized for each person.

- Instagram. Instagram is a photo-sharing application that allows users to share photos, videos, and messages on mobile devices. Instagram was acquired in April 2012 and at present, Facebook operates Instagram as a separate application from its core Facebook product.
- Messenger. Facebook’s Messenger application is a multimedia messaging application, allowing messages that include photos and videos to be sent from person to person across platforms and devices.
- WhatsApp. WhatsApp is a secure messaging application used by individuals and businesses. WhatsApp was acquired by Facebook in 2014 for \$21.8 billion, and at the time had approximately 450 million users worldwide. Facebook operates WhatsApp as its own application, separate from its Messenger and Facebook products and lines of business.
- Oculus. Oculus is Facebook’s virtual reality hardware line of business, which Facebook acquired in March 2014 for approximately \$2 billion.

69. Facebook’s revenue as of year-end 2018 was \$55.84 billion, with net income from operations of \$21.11 billion. Almost all of this revenue (\$55 billion) came from advertising, particularly mobile advertising. As of year-end 2018, Facebook maintained \$41.11 billion in cash and cash-equivalent securities. Facebook employed 35,587 people around the world at the end of 2018.

70. Across all of its lines of business, Facebook reported to investors in 2018 that it had 1.52 billion daily active users (“DAU”) on average for the year. Facebook reported 2.32 billion monthly active users (“MAU”) on average during the same period.

## JURISDICTION AND VENUE

71. This action arises under Section 2 of the Sherman Antitrust Act (15 U.S.C. § 2) and Sections 4 and 16 of the Clayton Act. The action seeks to recover treble damages, interest, costs of suit, equitable relief, and reasonable attorneys’ fees for damages to Plaintiffs and members of the Class resulting from Defendant’s restraints of trade and monopolization of the Social Data and/or Social Advertising Markets described herein.

72. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 (federal question), 1332 (class action diversity jurisdiction), and 1337(a) (antitrust); and under 15 U.S.C. § 15 (antitrust).

73. Venue is appropriate in this district under 15 U.S.C. § 15(a) (Clayton Act), 15 U.S.C. § 22 (nationwide venue for antitrust matters), and 28 U.S.C. § 1391(b) (general venue provision). Facebook transacts business within this district, and it transacts its affairs and carries out interstate trade and commerce, in substantial part, in this district.

74. The Court has personal jurisdiction over Facebook as it is subject to general jurisdiction in the State of California, where it maintains its headquarters and its principal place of business. The scheme, conspiracy, and monopolization alleged in this Complaint was targeted at individuals throughout the world and the United States, causing injury to persons not only throughout the world, but in the United States, including in this district.

## FACTS

### I. FACEBOOK EMERGES AS THE DOMINANT SOCIAL NETWORK

#### A. The Last Social Network Standing

75. Facebook’s meteoric rise since its founding in 2004 is well documented. The company—started in the dorm room of its CEO Mark Zuckerberg (“Zuckerberg”) as “the facebook”—rose to prominence in the face of fierce competition from several social networks. Initially an exclusive service for elite universities throughout the United States, Facebook

1 eventually expanded its network to encompass a general audience of users throughout the United  
2 States and worldwide.

3 76. Between 2004 and 2010, Facebook vanquished a number of rivals to emerge as the  
4 dominant social network in the United States.

5 77. Facebook's first chief competitor was MySpace. Founded in 2003—a year before  
6 Facebook—MySpace targeted the same audience, provided largely the same services, and rapidly  
7 attracted an enormous number of users. By 2005, MySpace had 25 million active users, and was  
8 acquired by NewsCorp for \$580 million. In 2006, MySpace registered 100 million users, passing  
9 Google as the most visited website in the United States.

10 78. However, the next three years featured a steady downward spiral for MySpace—  
11 and countervailing growth by Facebook. In 2008, Facebook passed MySpace in worldwide active  
12 users, and continued to grow, reaching 307 million active users across the globe by April 2009. In  
13 May 2009, Facebook passed MySpace in United States, 70.28 million to 70.26 million monthly  
14 active users.

15 79. MySpace never came close to Facebook again. By 2010, MySpace had mostly  
16 exited the market, leaving the business of social media for good. MySpace's CEO capitulated in  
17 November of 2010: "MySpace is not a social network anymore. It is now a social entertainment  
18 destination." In September 2010, MySpace reported that it had lost \$126 million, and in June 2011,  
19 NewsCorp sold the company for \$35 million—\$545 million less than it had paid for MySpace just  
20 six years earlier. By then, its user base had dwindled to just 3 million monthly visitors.

21 80. During the same time period, several other social networks also met their demise,  
22 including Google's Orkut, AOL's Bebo, and Friendster, which failed to scale rapidly enough to  
23 compete with MySpace and Facebook.

24 81. By 2009 and through 2010, Facebook emerged as the only peer-to-peer social  
25 media network to exist at scale, and no other network or company rivaled Facebook's massive user  
26 base. On March 2, 2010, *Adweek* reported that Facebook had booked revenues of up to \$700  
27

1 million in 2009 and was on track for \$1.1 Billion in 2010—almost all from advertising to its newly  
 2 won users. Facebook had been roughly doubling its revenues every year up until that point—\$150  
 3 million in 2007; \$280-300 million in 2008; and \$700 million in 2009.

4 82. Time Magazine heralded Zuckerberg as its 2010 Person of the Year.



16 83. Time's cover story set out the stakes—the scope of the newly assembled social  
 17 network was unprecedented and staggering:

18 What just happened? In less than seven years, Zuckerberg wired  
 19 together a twelfth of humanity into a single network, thereby  
 20 creating a social entity almost twice as large as the U.S. If Facebook  
 21 were a country it would be the third largest, behind only China and  
 22 India. It started out as a lark, a diversion, but it has turned into  
 23 something real, something that has changed the way human beings  
 relate to one another on a species-wide scale. We are now running  
 our social lives through a for-profit network that, on paper at least,  
 has made Zuckerberg a billionaire six times over.

24 84. By 2010, Facebook was unrivaled and dominant in a way no company since  
 25 Microsoft had been in post-personal-computer history. And it had done so by riding the currents  
 26 of powerful network effects.

**B. A New Market of Its Own Creation**

85. By the beginning of the millennium's second decade, Facebook was the indisputable king of an entirely new market—a market built not on hardware or operating system dominance, but one built on a network of people, with its power and value directly derived from their engagement with that network. The more data users fed into Facebook by communicating and interacting with each other, posting their pictures, and publishing their content, the more valuable the Facebook network became to third parties, who could advertise to Facebook's users by targeting them using the very information they provided to Facebook's network.

86. Data about what information users shared on their personal pages; the photos and profiles they viewed; their connections to others; what they shared with others; and even what they put in messages to other users all allowed targeted advertising on a scale that had never before existed. Unlike search advertising, Facebook's advertising platform allowed advertisers to target Facebook's user base by their attributes and behavior, not by a query entered into a search box. More importantly, unlike in search, user identity was not only discoverable, it was willingly provided by users—as was the identity of those users' closest friends and family members. These identities could be tracked and targeted throughout the Internet.

87. This social data created by Facebook's network of engaged users could be monetized in a number of ways. The data could be resold for targeted advertising and machine learning; Facebook's machine learning algorithms mined patterns in the data for advertisers, which allowed advertisers to reach precisely the right audience to convert into sales, user signups, or the generation of sales leads. The data also could be sold by commercializing access—for example, by providing application developers, content generators, and advertisers with direct access to the information embedded in Facebook's network, such as the interconnection between users, user attributes, and user behavior. That data then could be mined by these third parties.

88. All of the methods of monetizing social data were based on selling that data, but such data could be packaged, structured, or mined differently depending on the application for which it was being sold. For advertisers, Facebook's network presented advertisers and Facebook



1 itself with entirely new social signals, such as relationships, events, friendships, and granular  
2 interests. Movies, music, books were inherent parts of a user's profile. The amount of information  
3 in Facebook's network that could be mined as social data was unprecedented—and Facebook  
4 received all of that data daily from its millions of users in the United States and worldwide.

5 89. The data Facebook collected was uniquely social, derived from the engaged  
6 interactions and strong identity of Facebook's users. Twitter, a public-facing social network,  
7 loosely enforced identity, and never required users to disclose granular details about themselves.  
8 Facebook stood alone in this regard, with a clear product emphasis on individuals and their  
9 connections to others. In 2010, Google, Yahoo, and the other major online advertising sources  
10 competed in an entirely different market—one based on search data. The data Facebook had at its  
11 disposal was not fungible with search data—it was actionable data about individual users, with  
12 their identities fully ascertainable.

13 90. By 2010, Facebook stood alone as the dominant player in the newly emergent  
14 market for social data (the "Social Data Market")—a market in which Facebook's own users  
15 provided Facebook with a constant stream of uniquely valuable information, which Facebook in  
16 turn monetized through the sale of social data (for example, through advertising, monetizing APIs,  
17 or other forms of commercializing access to Facebook's network). Advertisers, finding no  
18 substitute from any other company, paid top dollar for Facebook's powerful targeting and  
19 actionable data, and some of those advertisers—wittingly or not—even fed crucial data about  
20 themselves, their products, and the efficacy of their targeting back to Facebook's network.

21 91. As Facebook itself explained to third-party developers in May 2007, Facebook's  
22 core value proposition and business model was "providing access to a new kind of data—social  
23 data, which enables you to build applications that are relevant to users." With respect to that data,  
24 Facebook told developers: "You are on a level playing field with us. You can build robust apps,  
25 not just widgets. Complete integration into the Facebook site." By 2010, it was clear that  
26 Facebook's entire business was selling this new form of "social data" and that it would do so by  
27



1 selling access to developers and selling advertisements targeting Facebook's network of engaged  
2 and active users.

### 3 C. The Social Data Barrier to Entry

4 92. As Facebook's dominant position in the Social Data Market emerged in 2010,  
5 powerful network effects and feedback loops took hold and solidified that position. Data provided  
6 by users made Facebook's network more valuable, thereby attracting more users to the network.  
7 As a typical use case, a Facebook user would invite his closest friends and family, who would then  
8 invite and engage with other friends and family members who existed on the network. A familiar  
9 feedback loop—a virtuous circle—emerged, rapidly growing Facebook's user base.

10 93. The content generated by this user base, in turn, increased the value of the Facebook  
11 network. With each photograph, relationship status, check-in, or post by a Facebook user, the  
12 Facebook network became more valuable, not just as a means of communicating with directly  
13 connected acquaintances, but as a means of learning about more remotely connected ones.

14 94. As Samuel Lessin, then Facebook's VP of Product Management, explained to Mark  
15 Zuckerberg in an internal email on October 26, 2012, the data Facebook collects makes Facebook  
16 progressively more proficient at collecting and monetizing data:

17 One of the things that puts us currently in a very defensible place is  
18 the relationship we have created between the people using Facebook  
19 all the time, and us having the information we need to make  
20 Facebook a better product. This is the fundamental insight in  
21 something like coefficient. *We know more about what people want*  
22 *to see because people look at more stuff on our platform.* In this  
23 respect, while there are other ways to get close, it feels viscerally  
24 correct that there is an ROS dynamic at play, *the more people that*  
25 *use the system, the more information we have on how to make*  
26 *more people use the systems.*

27 (emphasis added).

28 95. A barrier to entry emerged from this feedback loop. To compete with Facebook, a  
new entrant would have to rapidly replicate both the breadth and value of the Facebook network—  
a task a mere clone of that network could not accomplish. Indeed, to compete with Facebook, a

competitor would not only have to build its own vast network, but would have to draw active social engagement on a massive scale—which likely would require drawing a vast quantity of Facebook users away from that platform. The costs to switch would be massive: an entrant-competitor would have to present an overall value proposition to users that not only exceeded that of Facebook’s entrenched network, but one that did so handily. Moreover, to compete with Facebook’s virtuous circle, the value delivered by an entrant-competitor platform would have to facilitate social data mining that would create even more value for users, developers, and advertisers. This barrier to entry is referred to throughout this Complaint as the Social Data Barrier to Entry (“SDBE”).

96. The SDBE allows Facebook to control and increase prices in the Social Data and Social Advertising Markets without the pressures of price competition from existing competitors or new entrants. Because of the SDBE, Facebook has been able to consistently increase the price it charges for social data through advertising or direct access to its social data (*e.g.*, through APIs). And this is exactly what Facebook has done since it obtained its dominant position in 2010.

97. From 2011 to 2012, for example, Facebook massively increased the prices it charged for its advertisements—one of the primary sales channels for its social data. That year,

**Figure 1: Retail Facebook CPM, Q4 2012 – Q4 2013**



costs per thousand impressions (CPM) on Facebook increased by 41%, with a 15% increase in the last quarter of 2011 alone. Cost per click, which is a measure of advertising costs paid on a by-click basis, rose 23% that same year. Facebook increased prices as it also grew the number of

1 advertisements it displayed on its site, indicating direct market power over social data prices,  
2 particularly through the advertising channel for selling social data.

3 98. Facebook maintained that power over its prices through 2013, with a 2.9x increase  
4 in CPMs year over year. The increase came as overall advertising revenues increased yet again—  
5 that year by a staggering 83% over the last.

6 99. These price increases would not be possible without the SDBE. If a rival network  
7 existed with comparable Social Data available for sale through advertising, Facebook's price  
8 increases would have been met with customer migration to the comparable rival. But Facebook  
9 had no such rival and was unfettered in its ability to increase prices, even while rapidly increasing  
10 its supply of data for sale through advertisement or directly through its developer platform.

11 100. Once Facebook had achieved dominance in the Social Data market, its position  
12 only improved—and became more entrenched. The more advertising Facebook sold, and the more  
13 social data Facebook collected and packaged for sale, the more effective Facebook became at  
14 selling advertising, targeting users, and commercializing direct access to its users' social data (*e.g.*,  
15 through APIs). This, in turn, made entry by a new rival impossible or prohibitively costly, thereby  
16 allowing Facebook to increase prices and make additional investments that deepened the SDBE  
17 moat surrounding its business.

#### 18 **D. Google's Failed Entry into the Social Data Market**

19 101. In 2010, Google became desperate to enter the Social Data and Social Advertising  
20 Markets. It had tried several times to do so before, but each foray was met with failure. Google's  
21 Orkut social network, which was launched days before Facebook, was quickly overtaken. Wave,  
22 Google's social communication platform, never achieved any traction with users. And Google's  
23 Buzz social network—built on the back of its highly successful Gmail product—imploded quickly  
24 in early 2010.

25 102. Google's next attempt to enter the market attacked Facebook's functionality head  
26 on, which meant attempting to penetrate the powerful SDBE protecting Facebook's business.

1 Google made a massive, unprecedented investment of resources into building a product with  
2 enough value to lure users away from Facebook's broad, highly engaged social network.

3 103. In 2010, Google's Vic Gundotra became the company's Chief Architect. Gundotra  
4 pitched a new social network to Larry Page, Google's cofounder, who returned as CEO of the  
5 company in 2011. Gundotra repeated an ominous refrain, "Facebook is going to kill us. Facebook  
6 is going to kill us," which frightened Page into action.

7 104. Page greenlit a new product, Google+. Initially, Google+ sought to leverage  
8 Google's YouTube product to build its social network, requiring a Google+ account for access to  
9 certain key features of YouTube. In the face of significant user resistance, Google backed away  
10 from that requirement. Nonetheless, Google attempted, through Google+, to build out a "social  
11 graph" that would leverage a common user identity across Google products, including YouTube  
12 and Gmail.

13 105. In early 2011, Google began what insiders now refer to as "the 100-day march"  
14 toward launch of Google+. The product Google planned to deliver was, by any fair account, largely  
15 undifferentiated from what Facebook offered in terms of product features and functionality. By  
16 Summer 2011, the planned features for Google+ included a continuous scroll product called the  
17 "stream" (a clone of Facebook's "feed" product); a companion feature called "sparks," which  
18 related the "stream" to users' individual interests; and a sharing app called "Circles," a purportedly  
19 improved way to share information with one's friends, family, contacts, and the public at large.

20 106. Unlike Google's past products, Google+ was not designed to organically grow and  
21 scale from small beginnings. From the outset, Google invested massive amounts of resources to  
22 bring a finished, full-scale social network to market. Developed under the code name Emerald Sea,  
23 Google conscripted almost all of the company's products to help build Google+. Hundreds of  
24 engineers were involved in the effort, which remained a flagship project for Page, who had recently  
25 re-assumed the Google CEO role. Google's Gundotra was quoted explaining that the product that  
26 would become Google+ was a transformation of Google itself: "We're transforming Google itself  
27  
28

1 into a social destination at a level and scale that we've never attempted—orders of magnitude more  
2 investment, in terms of people, than any previous project.”

3 107. The amount of resources Google brought to bear stood in stark contrast to its  
4 previous attempts at penetrating the Social Data and Social Advertising Markets. Google had  
5 dedicated barely a dozen staff members to its previous failed social network product, Buzz. At its  
6 peak, Google+ involved 1000 employees from divisions across the country. Google, for example,  
7 ripped out its elaborate internal video conferencing system and forced employees to use the  
8 Google+ Hangouts video chat feature, which one internal employee described as “janky.”  
9 Employee bonuses were tied to the success of Google+. And, the entire project was confined to a  
10 level of secrecy never before seen at Google.

11 108. Google+ was released on June 28, 2011. The product included the “stream,” the  
12 “Circles” app, the “Hangout” video chat and messaging product, and a photo sharing product. The  
13 resemblance to Facebook was striking. As one internal Google employee commented: “this looks  
14 just like Facebook. What was the big deal? It’s just a social network.” Another Google employee  
15 was quoted as saying, “All this fanfare and then we developed something that in the end was quite  
16 ordinary.” One thing was indisputable: with the release of Google+, Google had challenged  
17 Facebook head-on by effectively cloning Facebook’s product.

18 109. Because Google’s user base was already massive, the Google+ product attracted  
19 millions of users shortly after launch. But although these users signed up for Google+, Google  
20 quickly found out that they were not using the product. As one former Google employee explained:

21 It was clear if you looked at the per user metrics, people weren’t  
22 posting, weren’t returning and weren’t really engaging with the  
23 product. Six months in, there started to be a feeling that this isn’t  
really working.

24 110. The problem for Google+ was the powerful network effect that reinforced the  
25 SDBE that protected Facebook. Google’s clone of Facebook did not present enough new value to  
26 overcome massive network-based switching costs—the cost to Facebook users of shifting away  
27

1 from an existing networked product that the users had actively invested their social data in for  
2 years.

3 111. Paul Adams, a former Google+ user-experience team member, summed it up  
4 succinctly when asked why Google+ had failed:

5 What people failed to understand was Facebook and network  
6 effects. . . . It's like you have this grungy night club and people are  
7 having a good time and you build something next door that's shiny  
8 and new, and technically better in some ways, but who wants to  
leave? People didn't need another version of Facebook.

9 112. By 2014, Google+ was declared a failure and Gundotra, its founder, eventually left  
10 Google. Within just a few years, Google—with all of its resources, developers, and existing user  
11 base—failed entirely to overcome the SDBE protecting Facebook. As long as Facebook controlled  
12 the data derived from an engaged and active user base, it could continue to keep that user base  
active and engaged.

13 113. The only way to disrupt this virtuous circle was with a rival product that provided  
14 significantly more or different value than Facebook, and that itself was propelled to scale by  
15 powerful network effects. By attempting to clone Facebook's functionality and failing to garner  
16 user engagement that could erode the SDBE protecting Facebook, Google+'s failure was virtually  
17 ensured at launch.

## 18 **II. A THREAT TO FACEBOOK'S MONOPOLY: THE RISE OF SMARTPHONES** 19 **AND MOBILE APPS**

### 20 **A. The Mobile App Revolution**

21 114. In 2009 and 2010, as Facebook emerged the undisputed winner of the newly formed  
22 Social Data and Social Advertising Markets, another new market had begun to take hold. The  
23 launch of the Apple iPhone in 2007 created a market for a new type of cellular phone—one with  
24 a user interface capable of robust Internet connectivity and messaging. No longer constrained by  
25 numeric keypads for texting—or clunky, permanent alphanumeric keyboards attached to phones,  
26 such as with the Treo or Sidekick cellular phones—the iPhone dynamically displayed a multi-  
27

1 touch keyboard and came equipped with a full-featured web browser that rendered complete  
2 webpages.

3 115. By the summer of 2008, Apple's newest iPhone, the iPhone 3G, was released with  
4 onboard GPS, as well as other hardware upgrades. Accompanying the release of the new iPhone  
5 was a new store for third-party applications that would run natively on the iPhone: the Apple App  
6 Store, which opened for business on July 10, 2008, the day before the release of the iPhone 3G.

7 116. Developers who launched their third-party applications via the App Store reaped  
8 huge rewards. There were approximately 500 apps available at the App Store's initial launch.  
9 Games using the iPhones accelerometer became immediate successes, some quickly earning  
10 hundreds of thousands of dollars by selling downloads for just a few dollars each. Applications  
11 that exploited the new GPS functionality in the iPhone also quickly became popular. By September  
12 2008, the Apple App Store had racked up 100 million downloads, and by 2009, it hit 1 billion.  
13 iPhone Apps had become a new means to deliver scaled value to countless users.

14 117. Google also launched what became its Play Store (initially known as Android  
15 Market) in 2008. It soon thereafter overtook Apple's App Store in terms of overall volume, with  
16 82% growth. The mobile app revolution had begun.

17 118. Mobile apps rapidly proliferated, with huge opportunities for further growth—as  
18 the lion's share of cell phone activity by 2010 had become something other than making phone  
19 calls. For example, a 2010 Pew Research survey showed that taking pictures and sending text  
20 messages had become the most common uses for cellular phones among adults, with more than a  
21 third of adult cell phone users accessing the Internet, playing games, emailing, recording video, or  
22  
23  
24  
25  
26  
27  
28

playing music through their cell phones. At the same time, 29% of adult cell phone users had used a downloaded app.

*% of adult cell phone users who do each of the following on their phone...*

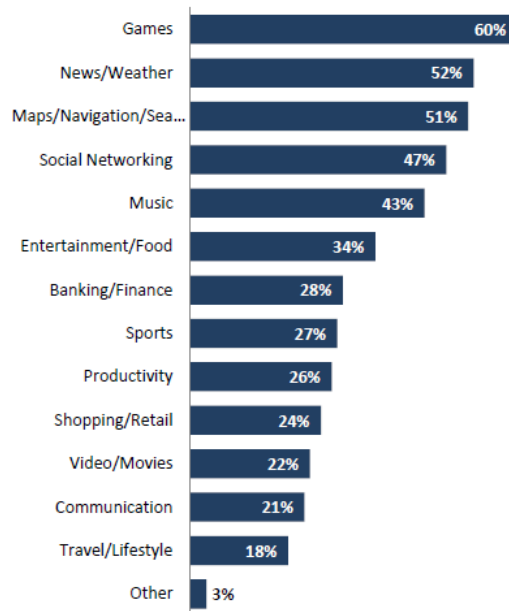
Take a picture	76%
Send or receive text messages	72
Access the internet	38
Play a game	34
Send or receive email	34
Record a video	34
Play music	33
Send or receive instant messages	30
<b>Use an app</b>	<b>29</b>

Source: Pew Research Center's Internet & American Life Project, April 29-May 30, 2010 Tracking Survey. N=1,917 adult cell phone users.

119. A 2010 Nielsen survey showed that games, news/weather, maps and navigation, and social networking were the most popular apps on cellular phones.

**What are the most popular types of apps?**

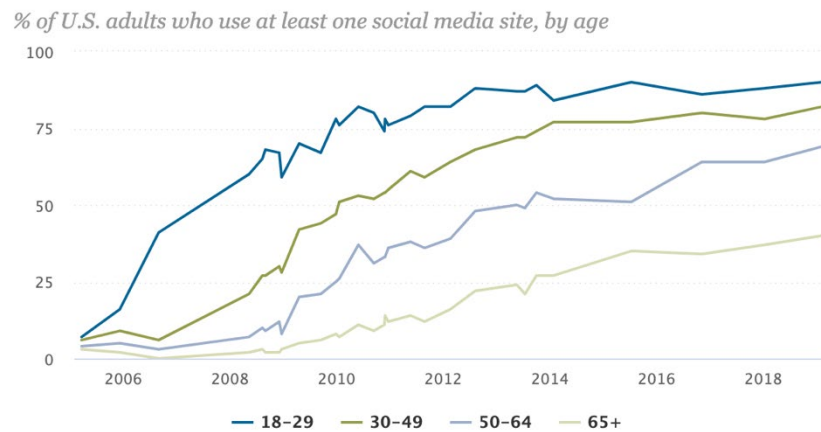
*% of Nielsen recent downloaders who have used each category of apps in the past month...*



Source: The Nielsen App Playbook, December 2009. N=3,962 adults who have downloaded an app in the 30 days prior to the survey.



120. Notably, mobile apps resonated most strongly with the demographics that had recently adopted social media and were providing their data to Facebook in droves. App users among cell phone owners were disproportionately younger, with 44% of app users in 2010 under the age of 20, and another 41% between the ages of 30 and 49. These were the same demographics that were rapidly adopting social media as part of their lives, and were providing Facebook with the social data that built and maintained the SDBE that protected its business.



121. Many of the mobile apps that were rapidly attracting users were doing so because they presented their own specialized value propositions. These apps had to be specialized because cellular phone screens were smaller, particularly in 2010, and mobile traffic was driven by specialty software, often designed for a single purpose. Users signed up for these apps with their e-mail addresses and personal information—and interacted directly with the apps.

122. As WIRED Magazine described in 2010, a typical user moved from app to app, each with some specialized use:

You wake up and check your email on your bedside iPad—that's one app. During breakfast you browse Facebook, Twitter, and the New York Times—three more apps. On the way to the office you listen to a podcast on your smartphone. Another app. At work, you scroll through RSS feeds in a reader and have Skype and IM conversations. More apps. At the end of the day, you come home,

1 make dinner while listening to Pandora, play some games on Xbox  
2 Live, and watch a movie on Netflix's streaming service.

3 123. In 2010, Morgan Stanley projected that within five years, the number of users who  
4 accessed the Internet from mobile devices would surpass the number who accessed it from PCs.  
5 The Internet was at an inflection point—the World Wide Web was no longer the dominant way to  
6 access information. Users were obtaining their information from specialized walled gardens, and  
7 Facebook's own walled garden was one app away from being superseded.

8 124. The years leading up to 2010 saw the rise of streaming apps, such as Netflix and  
9 Pandora, and e-book readers, such as Kindle and iBooks. Apple's 2010 list of top-grossing iPhone  
10 apps included mobile games such as Angry Birds, Doodle Jump, Skee-Ball, Bejeweled 2 + Blitz,  
11 Fruit Ninja, Cut the Rope, All-in-1 GameBox, the Moron Test, Plants vs. Zombies, and Pocket  
12 God. Facebook's mobile app topped the list of free downloads in the App Store, along with Words  
13 with Friends, Skype, and the Weather Channel App.

14 **B. Facebook Recognizes the Looming Threat Presented by Mobile Applications**

15 125. By 2011, Facebook realized that it had fallen behind. Facebook had just debuted its  
16 new "Timeline" product, a controversial modification of the Facebook feed that generated dynamic  
17 content for each user rather than a static series of posts visible to the user. Facebook had spent the  
18 last eight months prioritizing its desktop experience and its new Timeline product. But while it did  
19 so, mobile applications continued their meteoric rise.

20 126. Facebook's own mobile application was built on a technology called HTML5,  
21 which at the time was good for building web pages, but not for building mobile apps native to iOS  
22 and Android smartphones. As a result, Facebook's mobile app was buggy, prone to crashes, and  
23 painfully slow. As Zuckerberg would lament years later about HTML5, "we took a bad bet."

24 127. Zuckerberg reflected in 2018 that Facebook had fallen behind when mobile apps  
25 emerged:

26 One of my great regrets in how we've run the company so far is I  
27 feel like we didn't get to shape the way that mobile platforms  
28 developed as much as would be good, because they were developed

1 contemporaneously with Facebook early on. I mean, iOS and  
2 Android, they came out around 2007, we were a really small  
3 company at that point—so that just wasn't a thing that we were  
4 working on.

5 128. As mobile apps rose, Facebook's desktop product acquired users at a slower pace.  
6 All of this occurred as Facebook was planning its initial public offering. Facebook knew that its  
7 position was eroding and that if mobile growth continued, its IPO debut would be in the midst of  
8 material changes to its business, undermining Facebook's financial and qualitative disclosures to  
9 public investors.

10 129. But there was no avoiding the issue. After the IPO, when Facebook released  
11 statistics in its first major shareholder filing with the SEC in 2012, the trend was unmistakable—  
12 the transition to mobile devices from desktop web-based applications posed an existential threat  
13 to Facebook's business. Facebook disclosed this risk to shareholders as one of the factors that  
14 affected its bottom line:

15 ***Growth in the use of Facebook through our mobile products as a  
16 substitute for use on personal computers may negatively affect our  
17 revenue and financial results.***

18 We had 680 million mobile MAUs in December 2012. While most  
19 of our mobile users also access Facebook through personal  
20 computers, we anticipate that the rate of growth in mobile usage will  
21 exceed the growth in usage through personal computers for the  
22 foreseeable future and that the usage through personal computers  
23 may decline or continue to decline in certain markets, in part due to  
24 our focus on developing mobile products to encourage mobile usage  
25 of Facebook. For example, during the fourth quarter of 2012, the  
26 number of daily active users (DAUs) using personal computers  
27 declined modestly compared to the third quarter of 2012, including  
28 declines in key markets such as the United States, while mobile  
DAUs continued to increase. While we began showing ads in users' mobile News Feeds in early 2012, we have generated only a small portion of our revenue from the use of Facebook mobile products to date. In addition, we do not currently offer our Payments infrastructure to applications on mobile devices. If users increasingly access Facebook mobile products as a substitute for access through personal computers, and if we are unable to continue to grow mobile revenues, or if we incur excessive expenses in this

1 effort, our financial performance and ability to grow revenue would  
2 be negatively affected.

3 (some emphasis added).

### 4 C. The Facebook Platform

5 130. Although Facebook faced a looming threat from mobile applications, it maintained  
6 an important source of leverage: its social data. Facebook possessed (and continued to receive)  
7 vast quantities of information about its massive user base, including how each user was connected  
8 to others. This information was valuable to both new and existing mobile applications, which could  
9 leverage Facebook's social data to obtain new users and to build novel social features, functions,  
10 and apps.

11 131. Facebook referred to its network as its "Graph," coined after a mathematical  
12 construct that models connections between individual nodes. The Facebook Graph contained user  
13 "nodes," with connections and information exchanged among nodes as "edges." Facebook coined  
14 the term "Open Graph" to describe a set of tools developers could use to traverse Facebook's  
15 network of users, including the social data that resulted from user engagement.

16 132. Importantly, Open Graph contained a set of Application Programming Interfaces  
17 ("APIs") that allowed those creating their own social applications to query the Facebook network  
18 for information. As Facebook explained in its 2012 10-K:

19 *Open Graph.* Our underlying Platform is a set of APIs that  
20 developers can use to build apps and websites that enable users to  
21 share their activities with friends on Facebook. As Open Graph  
22 connected apps and websites become an important part of how users  
23 express themselves, activities such as the books people are reading,  
24 the movies people want to watch and the songs they are listening to  
25 are more prominently displayed throughout Facebook's Timeline  
26 and News Feed. This enables developer apps and websites to  
27 become a key part of the Facebook experience for users and can  
28 increase growth and engagement for developers.

29 133. Open Graph, along with other Facebook products, such as its NEKO advertising  
30 and Payments products, comprised Facebook's Platform. The Platform was vital to Facebook's  
31 business, because it ensured that engagement continued on Facebook. Without the Platform,

1 Facebook would be required to build applications that increased the value of its network itself—  
2 meaning that Facebook would have to try to predict what applications users wanted; design, code,  
3 and scale those applications across its user base and network; and bear the risk and resource drain  
4 of guessing wrong and making mistakes.

5 134. Facebook did not have the resources to do this, so it decided instead to allow third  
6 parties to build applications for the Facebook Platform. As Mark Zuckerberg observed in a  
7 February 2008 email to Facebook’s VP Engineering for Platform Michael Vernal, a senior  
8 Zuckerberg Lieutenant who was in part responsible for creating Open Graph:

9 Platform is a key to our strategy because we believe that there will  
10 be a lot of different social applications . . . . And we believe we can’t  
11 develop all of them ourselves. Therefore . . . . It’s important for us  
12 to focus on it because the company that defines this social platform  
will be in the best position to offer the most good ways for people  
to communicate and succeed in the long term.

13 135. Put simply, Facebook could either speculate on new social applications by building  
14 them itself, or it could provide a platform for others to do so. For years, Facebook opted to provide  
15 a platform until it was able to develop its own social applications.

16 136. But Facebook also recognized that developers on Facebook’s platform could  
17 potentially pose a competitive threat. In its 2012 Annual Report, Facebook disclosed the following  
18 significant risk factor to its operations:

19 In addition, Platform partners may use information shared by our  
20 users through the Facebook Platform in order to develop products or  
21 features that compete with us. . . . As a result, our competitors may  
22 acquire and engage users at the expense of the growth or  
engagement of our user base, which may negatively affect our  
business and financial results.

23 137. Thus, Facebook knew that competition could come from its own third-party  
24 application developers. But Facebook nevertheless actively sought developers to build  
25 applications on its Platform because of the potential to extract profits from the applications these  
26 developers built and the users they attracted to, and engaged on, Facebook’s Platform.

1           138. As Facebook explained to its investors in 2012, maintaining a Platform on which  
2 developers could build applications meant more engagement and therefore greater ad revenues for  
3 Facebook:

4           Engagement with our Platform developers' apps and websites can  
5 create value for Facebook in multiple ways: our Platform supports  
6 our advertising business because apps on Facebook create  
7 engagement that enables us to show ads; our Platform developers  
8 may purchase advertising on Facebook to drive traffic to their apps  
9 and websites; Platform developers use our Payment infrastructure to  
10 facilitate transactions with users on personal computers; Platform  
11 apps share content with Facebook that makes our products more  
12 engaging; and engagement with Platform apps and websites  
13 contributes to our understanding of people's interests and  
14 preferences, improving our ability to personalize content. We  
15 continue to invest in tools and APIs that enhance the ability of  
16 Platform developers to deliver products that are more social and  
17 personalized and better engaged people on Facebook, on mobile  
18 devices and across the web.

13           139. Facebook's Platform was valuable to Facebook in several important ways.

14           140. First, the Platform meant that new applications would be built on Facebook's  
15 network, increasing the value of Facebook's network as the applications became more popular.  
16 The increased engagement with Facebook as a result of these new applications translated to better-  
17 targeted content and higher advertising revenues.

18           141. Second, Facebook would not need to spend significant resources to develop new  
19 applications or test new business models—third parties would do that instead. Facebook could  
20 merely wait for an application built for its Platform to gain widespread adoption, then either build  
21 a competing application or passively glean the benefits of that popular application's user  
22 engagement, including valuable new social data for Facebook and its network.

23           142. Third, access to Facebook's network was itself valuable to third-party developers,  
24 so Facebook could charge developers—most notably, through API access and advertising  
25 purchases—to access Facebook's Platform and the social data it collected from Facebook's  
26 massive number of engaged users.

**D. The Profitable Open Graph Platform and Mobile Install Business**

143. Facebook continued to struggle to catch up with the new onslaught of mobile applications, but it recognized that the new apps required aggressive user growth to be profitable. Among other things, Facebook's APIs allowed mobile app developers to query the friends of a person's friends, which allowed mobile applications to find other users that might be interested in using their apps.

144. Mobile apps also could use Facebook to communicate across Facebook's network, either directly with a user's friends, or with others not directly connected with the user. A mobile payment application, for example, could enable two strangers to pay each other, even if they were not directly connected on Facebook—so long as both of them existed somewhere on Facebook's Platform. A user of a dating application, such as Tinder, could use Facebook's API to find a compatible date, either in the extended network of one's friends or beyond—anywhere on Facebook's platform.

145. Facebook quickly realized that it could monetize the value of its network through third-party mobile applications, and it moved aggressively to do so, beginning with games built to run on Facebook's Platform. Those games, many of which were social games that allowed users to play with and against each other, sought above all else new users to increase their adoption. Facebook's Vernal sought to obtain a beachhead with these applications, monetizing each additional game install that resulted from the use of Facebook's Platform or from Facebook's advertising product, NEKO.

146. For example, Facebook included ads as "stories" on user timelines that indicated whether the user knew other users who were playing a particular game. Facebook then monetized such advertisements when the game obtained new users from them. As Vernal explained in the same May 2012 e-mail:

The biggest/most efficient market segment for advertising on mobile today is driving app installs. This is at least partly because it's the most measurable—if you know that you get \$0.70 from every game you sell, then in theory you can afford to pay up to \$0.69/install. This kind of measurability allows for maximal bidding.



1 So, what we're trying to do is kickstart our sponsored stories  
 2 business on mobile by focusing on one particular type of story (is-  
 3 playing stories) and one market segment (games), make that work  
 really well, and then expand from there.

4 147. Facebook thus leveraged its most valuable asset—the information it had about its  
 5 users, their interests, and most importantly, their friends—to make money from the proliferation  
 6 of mobile games.

7 148. Games like Farmville, a mobile application that allowed players to create their own  
 8 simulated farms, quickly took off because of Facebook's Platform. Facebook increasingly  
 9 recognized that it could obtain engagement from users through the game itself.

10 149. This strategy led to a broader one, in which Facebook drove app installs by allowing  
 11 developers to advertise to its userbase and traverse Facebook's social network through the  
 12 Facebook API. Facebook collected a fee for each app install that resulted from its network. Vernal  
 13 outlined the plan in detail:

14 **Roughly, the plan:**

15 1/ Create new iOS + Android SDKs, because the current ones are  
 16 terrible. Ship Thunderhill so we get even broader adoption of our  
 stuff.

17 2/ Wire them up to make sure we know when you're playing a game  
 18 (so we can generate the same kind of is-playing stories we can on  
 19 canvas).

20 3/ Generate a bunch of effective, organic distribution for these  
 21 games via our existing channels (news feed, net ego on both desktop  
 + mobile). Ship send-to-mobile, which allows us to leverage our  
 22 desktop audience to drive mobile app traffic.

23 4/ Create an even better app store than the native app stores (our app  
 24 center) and make a lot of noise about it, so developers know that  
 they should be thinking about us to get traffic to their mobile apps.

25 5/ Introduce a paid offering, probably cost-per-install (CPI) based,  
 26 where you can pay us to get installs from your mobile app. Primary  
 27 channels for this paid distribution are News Feed and App Center  
 (on desktop + mobile) as well as RHC on desktop.



1 (emphasis in original).

2 150. The strategy was clear, not just for gaming, but for mobile apps. Facebook would  
 3 make money by allowing app developers to leverage its user base. Facebook would advertise social  
 4 games to its users by plumbing their social data—including data about when they played games  
 5 and which of their friends played them—and in exchange, Facebook would receive some amount  
 6 of money per install, which would be the app developer’s cost-per-install (CPI). The same plan  
 7 would work for mobile applications generally.

8 151. By the end of 2011 and the beginning of 2012, Facebook began discussing other  
 9 ways to monetize its Platform, including its Open Graph APIs. One way was to sell API access  
 10 based on usage. Zuckerberg and top executives at Facebook extensively debated a tiered approach  
 11 to API access. Facebook deliberated over a pricing model for API access, and internally decided  
 12 that it would be possible to sell API access to third-party developers. Facebook also decided that  
 13 it could bundle API access with the ability to advertise on Facebook. However, as explained below,  
 14 Facebook gave up the profits it could glean from API access for the chance to dominate the Social  
 15 Data and Social Advertising Markets entirely, excluding competitors (both actual and potential)  
 16 and leveraging network effects to achieve and maintain monopoly power.

### 17 **III. FACEBOOK WEAPONIZES ITS PLATFORM TO DESTROY COMPETITION.**

#### 18 **A. Facebook Makes Plans to Remove Vital Friends and News Feed APIs and** 19 **Refuses to Sell Social Data to Competing Application Developers.**

20 152. Although Facebook had made significant amounts of revenue and profit selling  
 21 access to its social data through its APIs and its NEKO advertising system and had planned to  
 22 expand that business, it chose not to, sacrificing those significant profits.

23 153. By the end of 2011 and the beginning of 2012, Zuckerberg along with Facebook’s  
 24 Vice President of Growth, Javier Olivan, its VP of Product Management, Samuel Lessin, and  
 25 Michael Vernal internally debated a plan to prevent third-party developers from building their own  
 26 competing social networks that could be capable of generating engagement and social data  
 27 independent of Facebook’s Platform.

1           154. Emerging mobile applications, such as Line, WeChat, and Instagram were creating  
2 their own vast user bases with identity and login features separate from the Facebook Platform.  
3 Their increasing ubiquity posed an existential threat to Facebook’s core business, which relied  
4 heavily on engagement from its user base. These applications provided quintessentially social  
5 applications, such as image sharing, messaging, and payments—a direct threat to Facebook’s own  
6 applications, including Facebook’s own fledgling Messenger application.

7           155. Mobile applications were rapidly eating away at Facebook’s dominance, which  
8 relied heavily on its web-based desktop product. Zuckerberg openly acknowledged that its desktop  
9 applications were not the future and that native phone apps would dominate the mobile web in the  
10 future.

11           156. Zuckerberg therefore sought to consolidate core applications into its own  
12 centralized Facebook application, noting in a March 2012 Q&A with employees that Facebook  
13 was “building towards social Facebook versions where you can use the individual app or the  
14 Facebook version.” That is, users could “replace whole parts of your phone with these Facebook  
15 apps and [they] will be a whole package for people.”

16           157. Beginning in the fall of 2011 and well into 2012, Mark Zuckerberg and his chief  
17 lieutenants, Lessin and Vernal, planned to address the looming mobile applications threat. Their  
18 solution was a scheme to disrupt the massive growth of mobile applications by attracting third-  
19 party developers to build for Facebook’s Platform and then remove their access to the APIs that  
20 were most central to their applications. They would accomplish this by leveraging Facebook’s  
21 “Friends” and “Timeline” APIs, as well as other vital APIs, including those relating to messaging.

22           158. The Friends APIs let third-party developers traverse the Facebook Graph, searching  
23 through a user’s friends, as well as their friends of friends. Zuckerberg and his executives proposed  
24 modifying the API to deny third-party developers access to information about a user’s friends (and  
25 the friends of their friends) unless that developer’s application was already installed by a user’s  
26  
27  
28

1 friends to begin with. This ensured that new applications could not obtain new users or use  
2 Facebook's social data to increase the value of their application.

3 159. Facebook also foreclosed developers from continuing to extract information about  
4 a user's friends from their timeline or news feed. Thus, third-party applications that relied on the  
5 stream of information that flowed through a user's news feed, such as a post about a friend of the  
6 user getting engaged or sharing a news article, would be abruptly left with none of the social data  
7 they needed to function.

8 160. Removing access to these APIs halted the growth of tens of thousands of third-  
9 party applications that relied on these essential APIs and were, in Facebook's view, threatening  
10 Facebook's dominance by eroding the SDBE that protected Facebook's business.

11 161. Facebook's plan prevented any competitive third-party application from buying  
12 social data from Facebook, either through its Platform APIs or through its advertising Platform.  
13 As Vernal explained to Lessin in August of 2012, Facebook would "***not allow things which are***  
14 ***at all competitive to 'buy' this data from us.***" (emphasis added).

15 162. Facebook thus refused to sell its social data to any competitive third-party  
16 developer, sacrificing significant short-term profits in exchange for a competitive advantage in the  
17 Social Data and Social Advertising Markets. If not for the prospect of driving these competitors  
18 out of the markets in which Facebook competed, the decision to refuse to sell social data to third-  
19 party developers made no economic, technical, or business sense.

20 163. Third-party developers with successful applications increased the value of  
21 Facebook's overall network by increasing engagement and generating the very Social Data  
22 Facebook sold through its targeted advertising channels, including to developers. As Zuckerberg  
23 had observed years earlier, Facebook itself could not broadly develop new third-party apps or  
24 anticipate what apps would be successful, so it relied on third parties to do so. Refusing API and  
25 social data access to third parties meant that they could not develop the applications that were vital  
26 to Facebook's growth, engagement, and advertising revenue. Facebook decided to deliberately  
27

1 sacrifice the value its third-party developers provided to secure dominance in the Relevant  
2 Markets.

3 **B. Facebook's Social-Data Heist**

4 164. In May 2012, Zuckerberg decided to use the threat of blacklisting from its Platform  
5 to extract precious social data from some of Facebook's competitors. He instructed his executives  
6 to quietly require "reciprocity" from major competitors that used Facebook's Platform. The  
7 reciprocity Zuckerberg demanded was the very lifeblood of these competitors' businesses—the  
8 social data harvested from user engagement on their competing networks.

9 165. By the middle of 2012, Facebook began to block some of its competitors from using  
10 its Platform and thereby obtaining Facebook's social data. Facebook had already blocked Google,  
11 including its competing social network Google+, from access to Facebook's APIs and advertising  
12 platform. With respect to Twitter, Instagram, Pinterest, and Foursquare, Facebook would demand  
13 "reciprocity" or blacklist them. Reciprocity, of course, meant that these competing social networks  
14 would have to hand over their most valuable asset—their social data—to their rival Facebook.

15 166. If rivals did not comply with Zuckerberg's demands to hand over their social data  
16 to Facebook, Facebook would simply take it. In May 2012, Vernal directed his subordinates,  
17 Douglas Purdy (Director of Engineering for Platform) and Justin Osofsky (VP of Global  
18 Operations), to build "our own hacky scraper" and a "bunch of scrapers" to crawl rival sites like  
19 Twitter and Instagram and harvest their social data—with or without their consent. If Twitter or  
20 Instagram refused to agree to Zuckerberg's "reciprocity" proposition, Facebook would use the  
21 scrapers to obtain the data instead.

22 167. In August 2012, Facebook considered broadening its list of companies to shake  
23 down for social data—or to block entirely from Facebook's Platform. That month, Facebook's  
24 then VP of Business and Marketing Partnerships, David Fischer identified other potential product  
25 categories and competitive companies in each category to block:

26 I'd expect that a large part of the market for our network will come  
27 from current and potential competitors. Here's the list that Jud

1 worked up of what we'd likely prohibit if we were to adopt a ban on  
2 "competitors" using a broad definition:

- 3 • Social network apps (Google+, Twitter, Path, etc.)
- 4 • Photo sharing apps (Picasa, Flickr, LiveShare, Shutterfly,  
5 etc.)
- 6 • Messaging apps (WhatsApp, Viber, Imo, KakaoTalk, etc.)
- 7 • Local apps (Google+ local, Google Offers, Yelp, yp, etc.)
- 8 • Social search apps (HeyStaks, Wajam, etc.)
- 9 • Platforms (Google Play, Amazon, etc.)

10 168. Facebook thus identified its direct, horizontal competitors in the Social Data and  
11 Social Advertising Markets. These categories of competing applications, particularly on mobile  
12 platforms, threatened Facebook's business because they created social networks independent of  
13 Facebook, each capable of generating their own valuable social data. If Facebook lost control over  
14 these companies, it would lose access to the social data they generated, which meant Facebook's  
15 own product could not drive engagement and sell advertising.

16 169. In August 2012, Facebook gave a presentation to its Board of Directors that  
17 included various revenue models to monetize its Platform, including its APIs. The Board  
18 understood that Facebook could monetize its platform by charging per company, per application,  
19 per user, or per API call.

20 170. But Facebook opted to do none of those things. Instead, it decided to sacrifice those  
21 profits in the short term to obtain complete control over the growing mobile application and  
22 advertising markets, thereby maintaining and furthering its dominance of the Social Data and  
23 Social Advertising Markets.

24 171. Facebook's plan was to instead block competitors from using its Platform, thereby  
25 preventing them from eroding the SDBE that protected Facebook's business. In the case of a select  
26 few companies with social data that Facebook needed to maintain and grow its own business,  
27 however, Facebook would coerce them into agreements to share their most valuable social data  
28

1 with Facebook. If they refused, Facebook would blacklist them and take it from them anyway with  
2 its own crawling software that would scrape their public-facing site for information.

3 172. In September 2012, Zuckerberg formalized his order to shut down the Friends and  
4 News Feed/Timeline APIs and to coerce rivals into providing their valuable data to Facebook on  
5 pain of blacklisting. On October 30, 2012, Vernal notified his subordinates of Zuckerberg's  
6 decision:

7 We are going to dramatically reduce the data we expose via the Read  
8 API . . . . We are going to change friends.get to only return friends  
9 that are also using the app . . . . Since friends.get will only returned  
10 other TOSed users' data [data from users that agreed to an  
11 application's terms of service], that means we no longer need the  
12 friends\_\* permissions. We are going to remove/whitelist access to  
13 the Stream APIs [the News Feed API]. We are going to limit the  
14 ability for competitive networks to use our platform without a  
15 formal deal in place . . . . We are going to require that all platform  
16 partners agree to data reciprocity.

17 173. This decision meant several things: (1) when a third-party application called the  
18 Friends APIs, it could not obtain information about a user's other friends unless those friends  
19 already had installed the application; (2) the News Feed APIs would no longer provide information  
20 about a user's connections; (3) access to those API could be "whitelisted" for third-party  
21 developers that were offered—and agreed to—data reciprocity; and (4) reciprocity would be  
22 required for any access to the APIs.

23 174. In November 2012, Osofsky, who was then head of Facebook's Platform,  
24 summarized the policy changes required by the decision:

25 Policy changes: define competitive networks + require they have a  
26 deal with us, regardless of size. Maintain size-based thresholds for  
27 all other developers to force business deals. Require data reciprocity  
28 for user extended info to ensure we have richest identity.

29 175. Facebook knew that these changes would eliminate the "growth channel used by  
30 23% of all Facebook apps" and that 89% of the top 1,000 iPhone apps relied on the full friends list  
31 API, with 75% of the top 1,000 iPhone apps relying on the Friends permissions APIs. Facebook  
32 determined that popular applications on its platform with millions of customers would break as a

1 result of the decision, including FarmVille, ChefVille, CityVille, Skype, Spotify, Xobni, Texas  
2 Holdem, Yahoo, Trip Advisor, Microsoft's Birthday Reminders, Samsung's clients, Glassdoor and  
3 dozens of others.

4 176. On November 19, 2012, Zuckerberg broadly announced his decision to block  
5 competitors or require full data reciprocity for continued access. Facebook's COO Sheryl  
6 Sandberg immediately ratified the decision, adding that "we are trying to maximize sharing on  
7 Facebook, not just sharing in the world," with the note that the distinction was a "critical one" and  
8 the "heart of why."

9 177. Facebook began preparing its 2013 plan for its mobile advertising business, which  
10 included the launch of a new version of its Platform, version 3.0. Platform 3.0 would (according  
11 to Facebook) facilitate Facebook's transition from its desktop advertising business to a mobile  
12 advertising business. A central element of the transition plan was the implementation of  
13 Zuckerberg's decision to remove the Friends and News Feed APIs.

14 178. Vernal explained Zuckerberg's decision to other Facebook employees in November  
15 2012, noting that he believed the amount of data that Facebook required from competitors was  
16 "crazy":

17 [A company must share] every piece of content by that user that can  
18 be seen by another user. What Mark is saying is he wants certain  
19 partners (I assume not all) to give us news feeds on behalf of their  
users, which is kind of crazy.

20 179. Facebook continued to formalize its plan to require the right to crawl the sites of its  
21 competitors as a condition of access to its Platform. In November 2012, Facebook's Group Product  
22 Manager, Rose Yao explained the scheme:

23 We also reserve the right to crawl a partner website for the user's  
24 data. Partners cannot blacklist or block Facebook from crawling  
25 your site or using the API. If they do, Facebook reserves the right to  
26 block the partner from using our APIs . . . . The theory behind  
27 Action Importers was that we needed to balance the leverage. You  
28 can call our APIs and access our data, as long as we can call your  
APIs (if you have them) or crawl your web site (if not) and access  
your data. It's one thing to drag your heels, but if we're the ones



1           doing the work then we force you to make a decision—either you  
 2           allow us access to your data, or you block us. If you block us, then  
 3           it’s really easy/straightforward for us to decide to block you. What’s  
 4           changed? *When we first started discussing this, we were talking*  
 5           *about doing this only for top partners. I think a lot of folks*  
 6           *interpreted this as just a negotiation tactic—we’d just threaten to*  
 7           *do this if they didn’t cooperate. What’s changed between then and*  
 8           *now is that this is now very clearly not a negotiation tactic—this is*  
 9           *literally the strategy for the read-side platform.*

10           (emphasis added).

11           180.   Thus, what began as a negotiation strategy to extract social data from rivals became  
 12           the foundation of Facebook’s Platform strategy. For competitors that posed enough of a threat to  
 13           create their own rival network, Facebook required them to hand over the only leverage they had—  
 14           the social data they derived from their users’ engagement.

15           181.   For some rivals that directly competed, no amount of data would justify access to  
 16           Facebook’s Platform, and for nascent threats that relied on Facebook’s platform that did not have  
 17           any useful data to extract, Facebook’s decision was to simply cut off their access to the Friends  
 18           and News Feed APIs, killing their businesses almost immediately.

19           182.   Vernal expressed concern about the strategy to Zuckerberg in November 2012,  
 20           noting that he was skeptical that competitors such as Pinterest would allow Facebook to take their  
 21           social data. If they, as well as others, did, Facebook would become a central exchange for data  
 22           collected among competitors. That is, competitors would share the data to Facebook and Facebook  
 23           would then share that data back to the competitors that participated in the scheme. *Facebook would*  
 24           *become a data-passthrough mechanism.*

25           183.   In December 2012, despite recognizing that API access, particularly when bundled  
 26           with Facebook’s NEKO advertising platform, was profitable, Facebook decided not to charge for  
 27           API access and began full implementation of Zuckerberg’s decision.

28           184.   Although Facebook had planned to announce its decision not to allow access to  
 Friends data through its Friends and News Feed APIs in a public blog post, Zuckerberg vetoed that  
 decision in December 2012. Instead, Zuckerberg decided to enforce the decision selectively and



1 covertly after deliberately analyzing Facebook's competitors. Some competitors would be blocked  
2 entirely from the APIs, while some select few would be blocked only if they did not provide their  
3 own social data to Facebook.

4 **C. Facebook Targets Its Competitors for Reciprocity or Denial of API Access.**

5 185. Beginning in January 2013, Facebook began an internal audit of all of the  
6 applications that relied on its Platform. It immediately identified competitors to shutdown entirely  
7 from accessing Facebook's APIs or advertising platform. Specifically, Zuckerberg ordered that  
8 WeChat, Kakao and Line be restricted from using the Friends and News Feed APIs and even from  
9 advertising on Facebook's NEKO and other platforms.

10 186. Facebook's David Fischer balked at the decision, noting that blocking competitors  
11 even from the advertising platform was irrational and unworkable:

12 I continue to believe we should allow ads from competitors for  
13 several reasons: We should be secure enough in the quality of our  
14 products to enable them to compete effectively in the open  
15 marketplace . . . . It looks weak to be so defensive. This will be a  
16 challenge to enforce. We have many competitors and the list will  
grow in time. How will we judge retailers and e-commerce sites as  
we grow Gifts, since they arguably are competitors too?

17 187. Fischer was right. The decision made no rational economic or business sense. The  
18 sole purpose of refusing to sell social data as part of the Facebook Platform or through advertising  
19 was to shut out competition and allow Facebook to dominate the Social Data and Social  
20 Advertising Markets. Aside from that anticompetitive purpose, the decision to refuse to sell social  
21 data or advertisements even at full price was so facially irrational that Facebook's own employees  
22 who may not have been fully privy to the anticompetitive scheme protested at the irrationality of  
23 the decision.

24 188. That same month Facebook's Osofsky pleaded with Vernal to make an  
25 announcement that would send a clear signal to developers, but Vernal responded that Zuckerberg  
26 had already rejected that approach. As Vernal explained, telling developers about the decision  
27  
28

1 means bearing the “very real cost” of “changing the rules,” including the “PR cost” of betraying  
2 developers that Facebook had induced to build for Facebook’s APIs and Platform.

3 189. That same month, Facebook continued to implement Zuckerberg’s decision to  
4 blacklist competitors. He ordered that Facebook competitor Vine be “shut down” from Facebook’s  
5 API and Platform, including from advertising. Facebook had again sacrificed the profits it would  
6 glean from increased engagement and advertising revenue as a result of Vine’s use of Facebook’s  
7 Platform in exchange for the exclusion of Vine from the competitive landscape.

8 190. Indeed, Facebook’s mobile advertising platform was growing rapidly, and blocking  
9 large companies from using it made no economic sense other than to effectuate Zuckerberg’s  
10 scheme to prevent rivals from competing with Facebook. In a January 20, 2013 email, Facebook’s  
11 then-Director of Product Management and Platform Monetization team, Deborah Liu reported:  
12 “Neko grew another 50% this week! Hit a high of \$725k Friday (see charge below). We are now  
13 5% of total Ads revenue and 21% of mobile ads revenue.”

14 191. Lessin responded to the news: “The neko growth is just freaking awesome.  
15 Completely exceeding my expectations re what is possible re ramping up paid products.”

16 192. Liu was clear, however, that the increased revenues occurred notwithstanding the  
17 blacklisting of formerly large spenders, such as WeChat: “WeChat and other competitive networks  
18 are no longer advertising on Neko based on policy.”

19 193. In February of 2013, Facebook shut down Yahoo’s access to key APIs, resulting in  
20 direct negotiations between Yahoo’s Marissa Mayer and Facebook’s Sheryl Sandberg in order to  
21 restore Yahoo’s access to the Facebook Platform.

22 194. In March 2013, Facebook’s key Platform employees began to voice concern that  
23 the approach taken by Facebook of shutting down access and then coercing “data reciprocity” was  
24 problematic. They instead encouraged making an upfront announcement that the APIs would be  
25 unavailable and then negotiating a deal for access to Facebook’s Platform. In an e-mail that month  
26 from Purdy to other Facebook employees and executives, he wrote:  
27  
28

1 I have been thinking about the challenges around reciprocity and  
2 competitive enforcement (friends.get, etc.) and fact that *it is all post*  
3 *facto*. The way we are structured today, you build an app on FB and  
4 then launch and then we may just shut you down, harming users and  
5 the developer. I wonder if we should move as quickly as possible to  
6 a model in product where all you get from platform is login (basic  
7 info) and sharing without approval. All other APIs are available in  
8 development, but have to be approved before the app launches to  
9 real users (basically all apps using friends.get have to have that  
10 capability approved). We are roughly on course to deliver this as  
11 part of unified review, save for the more granular approval for things  
12 like friends.get? What I love about this too is we could make our  
13 whitelists so much cleaner by making each capability an approval  
14 thing. Marie: I think makes your “deprecations” much easier.  
15 Thoughts?

16 195. Although Facebook moved towards full deprecation of the APIs with the exception  
17 of those with whitelisting agreements, it continued its campaign of quietly shutting down  
18 competitors’ access to the APIs and then asking them to make a reciprocity deal. Indeed, Facebook  
19 soon thereafter shut down three competing Amazon apps, resulting in Amazon protesting that the  
20 decision “will break 3 of our live integrations.”

21 196. That same March in 2013, Facebook used API and Platform access as leverage to  
22 acquire rival Refresh.io. Facebook internally decided that it would threaten Refresh.io with denial  
23 of access to the APIs unless it sold its business to Facebook. That same form of leverage would be  
24 used to acquire other rivals—either they sold to Facebook or they saw their business ejected from  
25 Facebook’s Platform.

26 197. In 2013, Facebook also began using mobile spyware company Onavo to secretly  
27 track application usage on customers’ phones. Onavo, through deceptive terms of service, tracked  
28 app usage in real time, and Facebook used that data to target specific competitors. By April 2013,  
Olivan was using Onavo to track Snapchat, Pinterest, WhatsApp, Tumblr, Foursquare, Google,  
Path, vine, Kik, Voxer, MessageMe, Viber, GroupMe, Skype, Line, and Tango. One internal  
Olivan presentation contained detailed usage data for these applications from August 2012 to  
March 2013.

1           198. By July 2013, Onavo data was providing detailed intelligence to Facebook on 30  
2 million Onavo users. Among all of the apps, the data showed the meteoric rise of WhatsApp, a  
3 direct competitor to Facebook’s own fledgling product, Messenger.

4           199. Armed with detailed intelligence about its competitors—both on and off the  
5 Facebook Platform—Facebook ordered a detailed audit of Facebook applications that relied on the  
6 Friends and News Feed APIs.

7           200. Facebook’s Director of Developer Platforms & Programs, Konstantinos  
8 Papamiltiadis, reported back that there were 40,000 apps using the APIs that were to be restricted,  
9 with 7% of them being photo or video sharing apps.

10           201. Facebook then began to categorize these third-party applications into three general  
11 categories: (1) developers that “may cause negative press” if their access to APIs were shut down;  
12 (2) applications that “provide strategic value”; and (3) applications that were “competitive” or “not  
13 useful to FB. Application developers that would experience “a Major Business Disruption/Kill” as  
14 a result of the restriction of API access received a “PR flag.”

15           202. In response to the categorization, Lessin immediately ordered his subordinates to  
16 “shut down access to friends on lifestyle apps . . . because *we are ultimately competitive with all*  
17 *of them.*” (emphasis added).

18           203. As Facebook continued its analysis of the applications that relied on the Friends  
19 and News Feed APIs, it became clear that Facebook’s plan would result in the deprecation of the  
20 “majority of the API surface”—namely, the APIs that were the most essential parts of the Facebook  
21 Platform.

22           **D. The Decision to Remove Developer Access to the Friends, News Feed and**  
23           **Other Crucial APIs Lacked Any Legitimate Justification.**

24           204. The engineers tasked with implementing Zuckerberg’s decision to restrict access to  
25 the APIs were baffled. The decision made no technical sense whatsoever. Indeed, there was no  
26 justification for it other than to squelch competitors who threatened Facebook’s dominant position  
27 and SDBE.

1           205. As Facebook engineer, David Poll, had written to all Platform Engineers earlier in  
2 2011, the decision would mean gutting the Facebook Platform of functionality used—and  
3 needed—by some of the most important mobile apps built on Facebook’s Platform:

4           I was thinking about the Platform 3.0 friend list change a bit as I was  
5 using my Android phone tonight and realized that two for the apps  
6 that most impact my day-to-day mobile experience will be  
7 completely, irrevocably broken by this change . . . . In both of these  
8 cases, the apps are adding real value to my experience, and in both  
9 of those cases, I have zero expectation that any of my friends will  
10 be using the app. The fundamental problem I’m having with this  
change is that my friend list is my information—it’s part of who I  
am, and for Facebook to shut down this access primarily comes  
across to me as FB intruding upon and shutting down my own access  
to my own information.

11           206. Poll concluded, “No matter how you slice it, this change is going to have a  
12 significant negative impact on my day-to-day smartphone experience.”

13           207. Poll was correct. The change meant breaking applications that added significant  
14 value to Facebook’s network and increased valuable user engagement on Facebook’s core product.  
15 The decision to deliberately break these applications had only one plausible purpose—to  
16 strengthen the SDBE and to ensure that competitors could not create rival social networks that  
17 could compete with Facebook.

18           208. That proposition was entirely obvious to those responsible for Facebook’s  
19 Platform. In an August 2013 e-mail, senior Platform engineer Bryan Klimt wrote to Ilya Sukhar,  
20 Facebook’s Head of Developer Products and Senior Engineer working on its APIs, and others  
21 working on Facebook’s Platform, stating that the reason for the decision to block access to the  
22 Friends and News Feed APIs was to exclude competitors and that all other reasons were simply  
23 false and pretextual. To begin with, Klimt was clear that the removal of the APIs was “ridiculous”  
24 because they were so essential to the Facebook Platform:

25           I’m trying to write a post about how bad an idea it would be to  
26 remove the api that lets you get a list of user’s friends from Facebook  
27 Platform. In order to illustrate my point, I’d like to satirically  
suggest removing some API that is so core to the developer

1 experience and that removing it would be ridiculous on its face. For  
2 example, removing the Windows API method that lets you create a  
3 new window. Or removing the Twilio API method that lets you send  
4 a text message. Both suggestions are utterly insane. The problem is,  
for Facebook Platform, removing the method to let you get a list of  
friends literally is already that ridiculous. I can't think of an example  
more ridiculous to parody it with.

5 209. Klimt then dispelled any notion that the APIs were being removed for any technical  
6 or functionality-driven reason:

7 Before we discuss in more detail, I'd like to clear up some  
8 misconceptions about the deprecations. I've heard some rumors  
9 floating around about why we are doing this. But many of them are  
10 clearly pabulum designed to make engineers think this decision has  
solid technical reasons. It does not. 1/ This API can be abused so we  
11 can remove it. False. That is a non-sequitur. Lots of APIs can be  
12 abused. Our whole product can be abused. That's why we have one  
of the best teams in the industry at detecting and stemming abuse.  
13 That team, plus Unified Review, is more than sufficient to deal with  
any theoretical abuse coming from this API. Even if this were true,  
14 who wants to be in that classroom where the whole class is punished  
for transgressions of a few?

15 210. Klimt also was clear that the APIs were not being removed in favor of new or  
16 different APIs providing the same features:

17 2/ It's okay to remove because we've provided alternatives for  
common uses. False. If you think that's true, then I don't think you  
18 realize why developer platforms exist. If we wanted to limit  
Facebook to the set of use cases we've already imagined, we could  
19 just do that ourselves, and not even have a Platform. The purpose of  
a Platform is to let people build new things on top of it. It's to enable  
20 the whole universe of ideas that anyone in the world could think of.  
Developers out there will have all sorts of crazy ideas. We want  
21 them to build those crazy ideas on top of Facebook. Do you know  
why Facebook was originally built for the WWW instead of being  
22 part of CompuServe or AOL's proprietary networks? It's because  
the web is an open and extensible platform. It lets developers make  
23 their craziest become reality.

24 211. Klimt then explained that the real reason was to hurt Facebook's competitors and  
25 prevent them from competing with Facebook:  
26

So, if neither of those reasons explains why we are doing this, what's driving it? The only reason I've heard that makes sense is that we are worried about people "stealing the graph", ***we are doing this as a protectionist grab to make sure no one else can make a competing social network by bootstrapping with our social graph.*** Okay, so let's assume for a minute that the social graph does belong to us, and not to our users. And let's even go so far as to assume that this is a real problem, although, I'm not convinced it is. I mean, concerns that other companies will steal our friend graph may just be paranoia. But for the sake of argument, let's say it's not. Then what? ***We're removing the core API in our developer platform. Out of concerns that someone will steal our social network product.*** That sends a clear message to developers: Facebook Platform comes second to Facebook the Social Network Product. This has been a criticism all along with our Platform. When you go read the blog posts critical of our Platform, they all hit on this same point. When our APIs are subjugated to the whims of our other products, they can't be stable. And an unstable platform isn't really a platform at all. So then you are left with 2 big problems. 1/ How do you convince external developers to build on a platform where the most basic core APIs may be removed at any time? I mean, the only big value we bring to the table right now is in distribution and discovery, and that's going to encourage developers to do only the most superficial integration with Facebook. Basically, they're going to do just enough to be able to use Neko ads. 2/ How do you convince internal developers to work on Platform knowing it's only ever going to play second fiddle to the rest of the company? I mean why should any of us work on a product that could be crippled at any time to benefit another team? If I worked on Platform, I would be seriously reconsidering my options if this API gets deprecated.

(emphasis added).

212. Klimt was clear—the decision to remove the APIs lacked any technical or business justification other than to prevent a competitor from creating a competing social network, eroding the SDBE protecting Facebook's business. Any proffered justification by anyone at Facebook to the contrary was entirely pretextual.

213. Moreover, the decision to remove the APIs permanently destroyed the value of Facebook's Platform. If developers could not trust Facebook to maintain the APIs as stable parts of its Platform, they would not risk writing apps for the Platform in the future. The decision meant



1 scuttling Facebook’s valuable Platform for the ability to prevent a rival social network from taking  
2 hold.

3 214. Sukhar responded to Klimt, noting that he agreed and that he “talks about this every  
4 single meeting.” His pleas to Vernal, Purdy and Zuckerberg to reverse their decision fell on deaf  
5 ears. The decision had been made and Klimt and Sukhar would have to implement it.

6 215. Facebook continued its audit of apps that relied on the APIs. Most of the Apps were  
7 important to the Facebook ecosystem. Indeed, Facebook acknowledged they “are not spammy or  
8 crap, but apps users like a lot.” Nonetheless, Facebook’s Papamiltiadis concluded that, among  
9 others, apps like Sunrise, Yahoo, IFTT, Friendcaster, MyLife, Sync.me, YouTube, Contacts+, and  
10 Bitly “overlap with Facebook products” and “could compromise our success in those areas.”

11 216. Facebook’s careful monitoring of competitive apps continued well into 2013, and  
12 given its heavy reliance on data secretly collected by Onavo, Facebook purchased Onavo on  
13 October 14, 2013. Facebook used that data to determine which apps competed with its social  
14 network and thus posed a threat to the SDBE. It then targeted those companies for withdrawal of  
15 API access and coerced data reciprocity agreements.

16 217. In October 2013, Facebook’s Purdy reported that Facebook was dividing apps into  
17 “three buckets: existing competitors, possible future competitors, developers that we have  
18 alignment with on business model.” Facebook’s Eddie O’Neil believed that the “separation  
19 between those categories doesn’t feel clean” and that the overlap was problematic. As O’Neil  
20 observed, “apps can transition from aligned to competitive and will ultimately make us sad that  
21 we leaked a bunch of data to them when they were aligned.”

22 218. Sukhar objected to the entire exercise, noting that he had been speaking to many  
23 dozens of developers “who will get totally fucked by this and it won’t even be for the right reason.”  
24 Sukhar explained that his “engineers think *this plan is insane* and I’m not going to support an all  
25 hands [meeting] to convince them otherwise.” (emphasis added).  
26  
27  
28



1           219. As Sukhar noted, the decision to withdraw the Friends and News Feed APIs from  
2 the Platform made no technical sense whatsoever, and Sukhar could not bring himself to tell his  
3 engineers—who saw through the ruse—otherwise. It was obvious that Facebook was seeking to  
4 squelch potential competition—namely, by preventing user growth and engagement for  
5 competitive apps. As one Facebook engineer commented about the obvious purpose of the plan to  
6 remove the APIs: “I understand we want to make it hard for a developer to grow a new app.”

7           220. The review of apps continued and specific decisions with respect to certain highly  
8 sensitive competitors were escalated to Mark Zuckerberg. As one internal Facebook e-mail  
9 explained:

10                   We maintain a small list of strategic competitors that Mark  
11                   personally reviewed. Apps produced by the companies on the list  
12                   are subject to a number of restrictions outlined below. Any usage  
                    beyond that specified is not permitted without Mark level signoff.

13           221. In December 2013, Klimt complained to Sukhar about the audit and categorization  
14 process:

15                   So we are literally going to group apps into buckets based on how  
16                   scared we are of them and give them different APIs? How do we  
17                   ever hope to document this? Put a link at the top of the page that  
                    says “Going to be building a messenger app? Click here to filter out  
                    the APIs we won’t let you use!”

18                   And what if an app adds a feature that moves them from 2 to 1. Shit  
19                   just breaks? And messaging app can’t use Facebook login? So the  
20                   message is, “if you’re going to compete with us at all, make sure  
                    you don’t integrate with us at all.”? I am just dumbfounded.

21           222. As Poll recognized in response to Klimt’s complaint, the changes to Facebook’s  
22 Platform were “more than complicated, it’s sort of unethical.” Klimt agreed with the assessment,  
23 noting that the API removal “feels unethical somehow . . . . It just makes me feel like a bad  
24 person.”

**E. Facebook Prepares to Announce Removal of the APIs.**

223. Zuckerberg decided to announce the API removal under the cover of a major change to the Facebook Platform, codenamed PS12N, which would be announced at the next Facebook F8 Developer Conference. Facebook's engineers were accordingly instructed in September 2013 to bury the changes to the API and announce them quietly along with the changes that would be announced at the conference.

224. In the run-up to its API withdrawal announcement, Facebook continued its audit of applications on its platform that were using the APIs. During that process Facebook continued to classify potential competitors, including LinkedIn and AirBnB, as companies that would be denied access with no whitelist exception.

225. Although Facebook knew that the APIs were going to be removed by the next F8 conference, it continued to tell developers to rely on them. As a Facebook Platform evangelist noted about one particular document frequently shared with developers, "the language in here around friend permissions is very counter to our upcoming platform simplification efforts" and "feels against the spirit of where we are headed."

226. That was, however, precisely what Facebook wanted—to continue to entice developers to build their software and their businesses on APIs that made them dependent on Facebook. The use of the APIs meant that competitors could be abruptly shut out of the market, useful apps could be extorted for valuable social data, and the rest could simply be destroyed.

227. By October 2013, Facebook required certain application developers it chose to whitelist to sign Private Extended API Agreements, which obligated them to purchase certain amounts of social data through advertising or to provide their own valuable social data to Facebook in exchange for continued access. That month, for example, Facebook whitelisted Royal Bank of Canada's application in exchange for the purchase of social data through Facebook's NEKO advertising platform.

1           228. Facebook catalogued and tracked developers on its platform that would likely  
2 complain about the decision, creating negative press. Facebook's internal employees tasked with  
3 crafting a PR message explained the undertaking in a December 2013 e-mail:

4                     In prep for Platform Simplification, we're putting together a list of  
5 developers who we think could be noisy and negative in press about  
6 the changes we're making: Primarily we think it will be a list of the  
7 usual suspects from past policy enforcements. We'd love to pull  
8 from your historic knowledge on the topic. Is there anybody you'd  
9 add to the list below? We're going to build plans around how we  
manage and communicate with each of these developers. There are  
also comms plans in the works for working with developers who are  
high ad spenders and friends of Mark/Sheryl."

10           229. Facebook planned to manage its message carefully, as its decision likely would  
11 alienate even those developers who were making large purchases of social data from Facebook  
12 through ads and/or who were friends of Facebook's two most senior executives, Zuckerberg and  
13 Sandberg. Those developers were identified and the message to them was carefully crafted to avoid  
14 a PR disaster. For most application developers, however, the decision would result in the complete  
15 exclusion of their applications from Facebook's ecosystem—which would likely be fatal to their  
16 businesses.

17           230. Facebook targeted potentially "noisy" or "negative" developers individually,  
18 including, but not limited to, the following applications and developers: iLike, Rock You, Zynga,  
19 Path, Flipboard, Slide, Social, Fixer, SocialCam, Viddy, BranchOut, Vince, Voxer, Message Me,  
20 Lulu, Anil Dash, Super Cell, Kabam, Washington Post, Guardian, The Wall Street Journal, Jason  
21 Calacanis, Cir.cl, Bang with Friends, Tinder, Social Roulette, App Wonder, Ark, Vintage Camera,  
22 and Girls Around Me.

23           231. Facebook also used call-log data secretly collected by Android users to target  
24 developers and applications to be shut down.

25           232. The entire process led Facebook engineer George Lee to lament:

26                     We sold developers a bill of goods around implicit OG [Open  
27 Graph] 2 years ago and have been telling them ever since that one  
28 of the best things they could do is to a/b/ test and optimize the

1 content and creative. Now that we have successes. . . . We're talking  
2 about taking it away . . . . [Developers] have invested a lot of time  
3 to establish that traffic in our system . . . . The more I think about  
4 this, the more concern I have over the pile of asks were [sic] making  
of our developers this year. PS12N is going to require them to alter  
how they deal with APIs (and for limited value).

5 233. Thus, as Facebook continued to prepare its API withdrawal announcement,  
6 Facebook's own executives recognized that Platform developers had been conned into relying on  
7 Facebook's APIs. Facebook knew full well that it intended to remove the APIs, but it allowed and  
8 encouraged developers to build entire businesses on and around them. As Lee put it, they were  
9 sold a "bill of goods."

10 234. By 2014, it was clear that with the exception of a few apps and developers, most  
11 would be denied access entirely to the Friend and News Feed APIs.

12 235. In January 2014, Zuckerberg debated denying API access to dating apps. Facebook  
13 decided that it would whitelist Tinder and other anointed dating apps and shut down the rest,  
14 clearing the way for the selected apps to dominate the dating market. Zuckerberg reasoned that  
15 although Facebook would ultimately create its own dating app, it would let Tinder and a select few  
16 others to survive until Facebook's competing app was ready:

17 I've been thinking a lot about Tinder and other people  
18 recommendation apps since about 10% of people in many countries  
19 are using a Tinder now. People recommendations seems like  
20 something that should be right up our alley, but it's currently  
21 something we're not very good at. Tinder's growth is especially  
22 alarming to me because their product is built completely on  
23 Facebook data, and it's much better than anything we've built for  
recommendations using the same corpus . . . . I think this is a big  
and important space and it's something we should have a team  
working on—probably to develop people recommendation Hunch  
sections for now.

24 236. Zuckerberg became increasingly involved in assessing whether individual apps  
25 would be whitelisted when the APIs were removed. Facebook's senior-most executives  
26 accordingly prepared recommendations for his consideration. In a January 2014 presentation  
27 entitled, "Slides for Mark," for example, Facebook employees summarized the results of the  
28

1 ongoing app audit. The presentation observed that the changes would make it “impossible to build”  
2 an app without a whitelist agreement with Facebook. The presentation made special  
3 recommendations for apps that purchased large amounts of social data through Facebook’s NEKO  
4 platform or whose developers were friends with Zuckerberg or Sandberg. The bulk of the 41,191  
5 apps that relied on the Friends or News Feed APIs, however, would be shut out and, as a result,  
6 completely destroyed.

7 237. Although the effect on these apps was clear, Facebook continued to evangelize the  
8 APIs to developers. In January 2014, Facebook’s George Lee sounded the alarm to Purdy and  
9 Vernal, which fell on willfully deaf ears:

10 [P]artner managers are still selling products that we ask them to sell,  
11 so when it comes to feed integration, we’re still telling people to use  
12 [Open Graph]. The last f8 was all about implicit [Open Graph], so  
13 while we may have decided amongst ourselves that this is no longer  
14 the future without an alternative we don’t have anything to tell  
current [developers] (so partners continue to tell them to use [Open  
Graph] and they continue to integrate it).

15 238. The plan to quietly take away the APIs in favor of a new crippled developer  
16 platform was called the “switcharoo plan” by Facebook’s engineers. It was clear to all involved  
17 that the announcement of the changes to the platform at the upcoming F8 conference was cover  
18 for the radical changes Facebook planned to make to its platform—namely, the removal of the  
19 Friends and News Feed APIs.

20 239. During March 2014, Facebook’s engineers and employees continued to be baffled  
21 by the upcoming decision. As one employee noted:

22 It seems a bit odd that we block other developers from doing things  
23 on our platform that we’re ok with doing ourselves. Do we consider  
24 ourselves exempted? That seems a little unfair especially when our  
25 stance on some of these policies is that they’re about ensuring trusts  
and a great experience. My mental model on how platform is a level  
playing field could be way off though.

26 240. The decision made no sense to Facebook’s own employees, particularly because  
27 Facebook itself needed the APIs to make their own competing applications, including Facebook’s

1 Messenger application. Facebook’s executives ignored all of the concerns raised by their  
2 employees, including their API engineers, and continued to drive towards the announcement of  
3 the removal of the APIs at F8.

4 241. The real reason for the removal of the APIs was kept tightly under wraps. In April  
5 2014, right before the announcement, Vernal warned Sukhar that if any mention was made of the  
6 competitive reasons for the removal of the APIs (as Sukhar wanted), there would be a “high  
7 likelihood of breaking into jail.”

8 **F. The Announcement at F8**

9 242. On April 30, 2014, Facebook announced “The New Facebook Login and Graph  
10 API 2.0” on Facebook’s website. Facebook heralded changes to its new Login system for several  
11 pages. Buried in the announcement was a quiet statement about the Platform’s most important  
12 APIs—the Friend and News Feed APIs: “In addition to the above, we are removing several rarely  
13 used API endpoints; visit our changelog for details.”

14 243. These APIs were not *rarely used* at all. Tens of thousands of third-party apps were  
15 actively using and building on the APIs. Internal Facebook engineers likened them to essential  
16 APIs in Microsoft’s Windows and were outraged at the removal. Five of the top ten Facebook  
17 Apps surveyed in December 2012 relied heavily on them. The announcement was entirely false  
18 and was deliberately buried beneath other API announcements to avoid drawing attention to the  
19 competition-crippling effect of the decision. In fact, today, the changelog referred to in the  
20 announcement is no longer accessible on Facebook’s page even though years of other changes are.  
21  
22  
23  
24  
25  
26  
27  
28

244. When Mark Zuckerberg took the stage at F8 days later for his keynote speech, there was no mention of the removed APIs. Instead, Zuckerberg emphasized the “stability” of Facebook’s mobile platform just as Facebook quietly removed some of the most heavily relied-upon and necessary APIs in Facebook’s Platform.



245. At the twenty developer sessions preceding the announcement, not one mention was made of the API removal or that the upcoming changes would simply break nearly all of the more than 40,000 third-party apps that relied on the APIs. After April 30, 2015, the APIs were no longer part of any available version of Facebook’s Platform.

246. Facebook thus had successfully destroyed any application that could possibly create a product that could threaten the SDBE that protected Facebook’s dominant position and market power. A select few would be required to hand over their most valuable resource—their social data—to their behemoth competitor in exchange for continued access.

#### IV. THE WHITELIST AND DATA SHARING AGREEMENTS

247. After the announcement and through the full removal of the APIs in April 2015, Facebook continued to make a series of agreements that forced certain competitors to hand their data over to Facebook. For example, Facebook forced certain third-party developers that it identified as competitive threats with valuable social data to sign Private Extended API



1 agreements—referred to throughout this Complaint as “Whitelist and Data Sharing Agreements”  
2 or simply “the Agreements”—in order to obtain access to the Friends and/or News Feed APIs.

3 248. Facebook’s Whitelist and Data Sharing Agreements, as of January 2015, included  
4 a provision that acknowledged that the APIs they covered are not available to the general public.  
5 An exhibit to each Whitelist and Data Sharing Agreement listed the specific Facebook APIs to  
6 which a particular developer was being granted access.

7 249. These Agreements were only offered in exchange for massive purchases of  
8 Facebook’s social data through mobile advertising and/or through the provision of the developer’s  
9 own social data back to Facebook (so-called “reciprocity”).

10 250. As Facebook executives and engineers understood and acknowledged in internal  
11 communications, this scheme allowed Facebook to serve as a “data pass-through” among  
12 competitors. Competitors with Whitelist and Data Sharing Agreements provided social data to  
13 Facebook, which sold data obtained from one competitor to another whitelisted competitor.

14 251. If a developer refused to participate in the scheme, it was excluded entirely from  
15 Facebook’s Platform because the most important APIs—the Friends and News Feed APIs—would  
16 not be available to it.

17 252. In January 2015, Facebook provided Whitelist and Data Sharing Agreements to the  
18 dating apps Tinder and Hinge, because of the value of the social data those applications produced.

19 253. In February 2015, when Airbiquity (another third-party developer) sought a  
20 Whitelist and Data Sharing Agreement, Facebook lied to them, telling Airbiquity that the specified  
21 APIs “won’t be available to anyone” after April 30, 2015, and that “all similar integrations will be  
22 subject to the same deprecations/restrictions.”

23 254. That same month (February 2015), Facebook secretly signed Whitelist and Data  
24 Sharing agreements with other third-party developers, including Netflix, Nissan, and Lyft.

25 255. In April 2015, Facebook’s manager of strategic partnerships, Ime Archibong,  
26 internally celebrated the fruition of Facebook’s three-year plan to eliminate its competition through  
27



1 Platform changes: “Three years coming, but the ‘Platform Simplification’ initiative finally lands  
2 this week.”

3 256. Also in April 2015—as Facebook finally cut off all public access to the Friends and  
4 News Feed APIs—Facebook continued to receive requests for Whitelist and Data Sharing  
5 Agreements from companies such as Microsoft, Hootsuite, and Walgreens.

6 257. Facebook had already extracted valuable social data from dozens of competitors,  
7 including Foursquare and Pinterest, in the run-up to the announcement and ultimate removal of  
8 the APIs. Without discovery, the precise number and identity of those who entered into Whitelist  
9 and Data Sharing Agreements with Facebook cannot be known for certain, but publicly available  
10 information indicates that dozens of app developers entered into such Agreements with Facebook.

11 258. Absent the Agreements and Facebook’s overall anticompetitive scheme to exclude  
12 third-party developers, other companies could have created their own social data through the  
13 proliferation of their own competing social networks. The engagement on their competing  
14 networks and the social data generated from that engagement would have increased the value of  
15 their networks because of network effects. As the amount of social data generated and monetized  
16 on these competing networks increased, Facebook’s SDBE would erode, potentially driving more  
17 users to new platforms.

18 259. None of that could happen as long as Facebook could coercively demand all of the  
19 valuable social data generated on any competing platform. The Whitelist and Data Sharing  
20 Agreements ensured that competitive threats such as Foursquare could not accumulate enough  
21 social data to create their own feedback loop in—and perhaps come to dominate, through network  
22 effects—any market in which Facebook anticipated competing or actually competed.

23 260. The Agreements also ensured that Facebook’s decision to destroy forty thousand  
24 applications built on the Friends and News Feed APIs would be effective—and remain so. If  
25 Facebook did not control the supply and sale of social data, excluded developers could simply  
26 build their applications on another platform. But by entering into a network of Whitelist and Data  
27

1 Sharing agreements, Facebook ensured that no such competing platform could arise. The  
2 Agreements strengthened and preserved the SDBE and/or prevented the proliferation of rival  
3 generators of social data and third-party developer platforms.

4 261. In a world where no such Agreements existed, a rival such as Pinterest or  
5 Foursquare would obtain more engaged users, resulting in more social data that those competitors  
6 could monetize through their third-party or advertising platforms. The thousands of developers  
7 denied access to Facebook's Platform would therefore build their applications on Foursquare or  
8 Pinterest instead of simply going out of business or changing their products/businesses  
9 dramatically to survive. By forcing those and other similarly situated companies to hand over their  
10 social data, Facebook made sure its Platform would be the only viable platform upon which a third-  
11 party social application could be built.

12 262. As explained in the next section, the only remaining threat to Facebook's Social  
13 Data and Social Advertising dominance was from a completely independent competitor that did  
14 not rely on Facebook's Platform, and thus could not be extorted into handing over its data in  
15 exchange for API access. For such companies, Facebook would pay any price to remove them  
16 from the market—and use their assets to strengthen Facebook's SDBE.

17 263. But first, Facebook had to identify such threats to its market dominance. Enter  
18 Onavo.

## 19 **V. THE SURVEILLANCE AND ACQUISITION OF COMPETITIVE THREATS**

20 264. To ensure that its scheme to maintain and expand its market power would work,  
21 Facebook had to control an important source of competition: independent social networks and  
22 producers of social data. Although Facebook could simply destroy any competition that relied on  
23 its Platform by denying access to essential APIs, this would do nothing to stop a competitor that  
24 was growing its network of engaged users entirely independent of Facebook.

25 265. To detect such threats before they became too formidable, Facebook sought a way  
26 to covertly surveil millions of mobile users to determine what applications they were using, and  
27

1 how. Mobile applications were particularly important—and concerning—to Facebook, as desktop  
 2 engagement was shrinking while mobile apps rapidly proliferated. By 2012, it was clear to  
 3 Zuckerberg and to Facebook that any threat to its dominance would come from a mobile  
 4 application. As explained in this section, Facebook used mobile spyware on an unprecedented  
 5 scale to surveil, identify, and eventually remove from the market through acquisition competitors  
 6 that independently threatened Facebook’s dominance and/or the SDBE protecting its monopoly,  
 7 market power and business.

8 **A. Facebook Relies on Onavo’s Surveillance of Facebook’s Competitors, and**  
 9 **Acquires and Uses Onavo’s Assets**

10 266. Onavo was an Israeli mobile web analytics company founded by Roi Tiger and Guy  
 11 Rosen in 2010. The company designed spyware designed to surveil users as they used their mobile  
 12 devices. To obtain extensive information on a user’s usage of mobile applications and of  
 13 bandwidth, Onavo cloaked its spyware in virtual private networks (“VPNs”), data compression,  
 14 and even in mobile privacy apps.

15 267. Onavo sold the mobile usage data it collected to Facebook, which in turn used the  
 16 real-time information it received from Onavo to determine which mobile applications posed a  
 17 threat to Facebook’s dominance and to the SDBE protecting Facebook from new entrants and  
 18 competition. Facebook used Onavo data to: (a) identify and target competitors from which  
 19 Facebook could demand Whitelist and Data Sharing Agreements; (b) identify and target  
 20 competitors to whom Facebook would completely deny Platform access; and (c) identify and target  
 21 competitors that Facebook would remove from the competitive landscape entirely through  
 22 acquisition.

23 268. Facebook received Onavo information in real time, which included the two most  
 24 important metrics for competing mobile applications—their reach and engagement. Reach  
 25 measures the size of an application’s user base, and “engagement” measures the extent to which  
 26 users actively engage with the application. An application with high reach but low engagement  
 27 cannot generate the sort of social data that Facebook needs to feed its advertising platform with  
 28

1 actionable targeting data. Conversely, an application with high engagement but low reach doesn't  
2 generate social data from enough people to attract a broad base of advertisers. The greatest threat  
3 to Facebook's business would come from an application that exhibited strong reach and strong  
4 engagement—and especially one that showed rapid growth in both metrics, indicating the  
5 development of network effects.

6 269. As the potential threat to its market dominance from mobile applications continued  
7 to grow, Facebook sought to obtain exclusive control over Onavo's surveillance data—and over  
8 its mobile spyware code and installed base. On October 13, 2013, Facebook acquired Onavo.

9 270. On its blog, Onavo's CEO Guy Rosen and CTO Roi Tiger, announced that Onavo  
10 would continue as a standalone brand: "When the transaction closes, we plan to continue running  
11 the Onavo mobile utility apps as a standalone brand. As always, we remain committed to the  
12 privacy of people who use our application and that commitment will not change."

13 271. Facebook, however, had other plans. It immediately began integrating Onavo's  
14 applications into both its business operations and its acquisition strategy. Facebook, for example,  
15 began analyzing data secretly collected from Onavo's Protect software, which was a massive  
16 surveillance and data collection scheme disguised as VPN software. Billed as a way to "keep you  
17 and your data safe," Onavo Protect in fact monitored all web and mobile application traffic on a  
18 user's mobile device.

19 272. When an Onavo Protect user opened a mobile app or website, Onavo software  
20 secretly redirected the traffic to Facebook's servers, where the action was logged in a massive  
21 database. Facebook product teams then analyzed the aggregated Onavo data to determine which  
22 apps and features people were using in real time, how frequently they used the apps, and for how  
23 long. If the data in an app was not encrypted, this information was as specific as (for example) the  
24 number of photos the average user likes or posts in a week in that app.

25 273. Based on a 2017 estimate, Onavo's mobile apps were downloaded an estimated  
26 twenty-four million times, and Facebook collected, compiled, and leveraged all of the collected  
27

1 data. By February 2018, Onavo apps had been downloaded thirty-three million times across both  
2 iOS and Android.

3 274. As the former chief technologist for the Federal Trade Commission remarked to the  
4 press, Onavo was being leveraged against user interests to stifle competitive innovation:

5 Instead of converting data for the purpose of advertising, they're  
6 converting it to competitive intelligence . . . . Essentially this  
7 approach takes data generated by consumers and uses it in ways that  
8 directly hurts their interests—for example, to impede competitive  
9 innovation.

10 275. Since 2011 and through the present, Onavo products have provided Facebook with  
11 real time data about mobile users on a breadth and scale not available through any other service or  
12 app. Using Onavo data, Facebook was able to determine which potential competitors it could target  
13 for its Whitelist and Data Sharing agreements; which competitors it could destroy by denying  
14 access to crucial APIs; and which competitors is needed to remove from the market through  
15 acquisition to preserve its monopoly position and SDBE.

16 276. Moreover, by monitoring potential threats, Facebook ensured that it had no blind  
17 spot—any application that posed a threat to its dominance was dealt with through anticompetitive  
18 and unlawful Whitelist and Data Sharing Agreements, destruction by denial of access to vital APIs  
19 on Facebook's platform, or by acquisition.

20 277. By acquiring Onavo, Facebook obtained exclusive access to the only real-time and  
21 high-quality source for mobile app user metrics at scale. Because of the acquisition of Onavo,  
22 Facebook strengthened the SDBE by ensuring that any threat to its dominance of the Social Data  
23 and Social Advertising Markets was dealt with at the earliest possible stage. Indeed, through  
24 Onavo, Facebook was able to (and did) track mobile app usage and trends essentially from launch.  
25 If a potential Facebook killer was on the rise, Facebook had a unique tool to identify it before  
26 anyone else could—and Facebook used it.

27 278. In the years after it acquired Onavo, Facebook continued to aggressively leverage  
28 the company's codebase in deceptively labeled apps that facilitated maximum surveillance and

1 data collection of mobile users. For example, Facebook placed Onavo spyware in apps whose  
2 stated purposes required privileged access to user's mobile devices (in some cases, super-user  
3 privileges), allowing Facebook to gather data on virtually every aspect of a user's mobile device  
4 usage.

5 279. The abuses by Facebook were so flagrant that on August 22, 2018, Apple banned  
6 Facebook's Onavo app from its App Store. Apple ejected Facebook's app from its marketplace  
7 because it violated Apple's rules prohibiting apps from using data in ways far beyond what is  
8 required to run the app and provide advertising. In other words, because Onavo Protect was  
9 leveraging far more data than any VPN could conceivably need, it was clear that the true purpose  
10 of the app was to spy on Onavo users, and Apple would not allow it.

11 280. Indeed, the amount of surveillance was jaw-dropping. Facebook's Onavo Protect  
12 app reported on users' activities whether their screens were on or off; whether they used WiFi or  
13 cellular data; and even when the VPN was turned off. There was simply no rational relationship  
14 between the data collected and the purported purpose of the application. Put simply, a VPN that  
15 collected data even when the VPN was off was an obvious subterfuge for blatant spying on user  
16 behavior.

17 281. Undeterred, Facebook repackaged its Onavo spyware as a Facebook Research VPN  
18 app. Facebook sidestepped the App Store by rewarding teenagers and adults when they  
19 downloaded the Research app and gave it root—superuser—access to network traffic on their  
20 mobile devices. Facebook has been leveraging its Onavo code in similar ways since at least 2016,  
21 administering the program under the codename “Project Atlas”—a name suited to its goal of  
22 surveilling app usage on mobile devices in real time.

23 282. When the news broke in January 2019 that Facebook's Research apps were  
24 repackaged Onavo apps designed to spy on users, Facebook immediately withdrew the programs  
25 from the Apple App store.  
26  
27  
28

1           283. Apple again concluded that Facebook had tried to violate its policies. Using Apple's  
2 Enterprise Developer Program, which allows the installation of a certificate or policy that provides  
3 root access to an iPhone or iPad, Facebook obtained a level of administrative privilege designed  
4 for a company's internal IT department. Thus, using a system that allowed organizations to manage  
5 their internal mobile devices, Facebook provided its spyware super user access to regular people's  
6 iPhones and iPads. Apple balked at the abuse. An Apple spokesman stated:

7           We designed our Enterprise Developer Program solely for the  
8 internal distribution of apps within an organization. Facebook has  
9 been using their membership to distribute a data-collecting app to  
10 customers, which is a clear breach of their agreement with Apple.  
11 Any developer using their enterprise certificates to distribute apps  
to consumers will have their certificates revoked, which is what we  
did in this case to protect our users and their data.

12           284. U.S. Senator Mark Warner immediately called for new legislation to prevent the  
13 sort of abuse which Facebook had engaged in. U.S. Senator Richard Blumenthal issued a fierce  
14 statement rebuking Facebook's repackaging of the Onavo spyware app as "research":  
15 "Wiretapping teens is not research, and it should never be permissible."

16           285. In addition to Onavo's Protect app, Facebook has attempted to deploy its  
17 surveillance software as other forms of utility applications that require extensive or privileged  
18 access to mobile devices. For example, Facebook released the Onavo Bolt app, which locked apps  
19 behind a passcode or fingerprint while it covertly surveilled users—and sent Facebook the results.  
20 Facebook also shut that app down the very day that its surveillance functionality was discovered.  
21 The Onavo Bolt app had been installed approximately 10 million times.

22           286. Facebook continues to possess Onavo's code base and is likely, as it has done  
23 before, to repackage its surveillance software into yet another app. Facebook can also easily  
24 incorporate surveillance code into any of its mobile applications that enjoy massive installed bases  
25 and reach, including Instagram and WhatsApp. Without deterrence or divestiture, Facebook will  
26 continue leveraging the surveillance software, infrastructure, and analysis that it acquired as part  
27 of its acquisition of Onavo.  
28

**B. Facebook Identifies Instagram as a Threat and Acquires the Company.**

287. Data from Onavo reported a significant threat on the horizon likely as early as 2011 (and certainly by 2012): a photo-sharing mobile application called Instagram. That app had its origins when founder Kevin Systrom, then 27, learned to code over nights and weekends. Systrom developed an app called Burbn, which allowed users to check in, post plans and share photos. The photo sharing feature immediately became the app's most popular.

288. After meeting venture capitalists from Baseline Ventures and Andreessen Horowitz, Systrom received \$500,000 of funding. Systrom soon after met co-founder Mike Krieger—then 25 years old—who focused on the user experience of the app.

289. Seeing the positive reception to the photo sharing aspect of the Burbn app, Krieger and Systrom decided to pivot their business to focus on that feature. They studied their rivals in the category, including an app called Hipstamatic, which included photo-editing features, including the ability to add filters to photos. Hipstamatic, however, had no social capabilities.

290. Seeking to bridge the gap between Hipstamatic photo features and Facebook's elements, Systrom and Krieger stripped Burbn down to its photo, comment, and like capabilities. They then renamed the app Instagram, containing the words "instant" and "telegram."

291. Systrom and Krieger worked tirelessly to polish the user experience of their new application, designing Instagram to streamline the process of taking photos on mobile devices and uploading them to a social platform. The app had a minimalist focus, requiring as few actions as possible from the user. After eight weeks of fine-tuning, the app entered its beta phase and the founders prepared to launch it on iOS.

292. On October 6, 2010, Instagram launched on iOS. That very day it became the top free photo-sharing app on Apple's App Store, racking up twenty-five thousand downloads. Instagram's founders were stunned at the response. As Systrom noted after the launch: "First off, we have to say that we never expected the overwhelming response that we've seen. We went from literally a handful of users to the #1 free photography app in a matter of hours."



1           293. By the end of the first week, Instagram had been downloaded 100,000 times, and  
2 by mid-December 2010, its total downloads had reached one million. The timing of the app was  
3 impeccable, as the iPhone 4, with its improved camera, had launched just a few months earlier in  
4 June 2010.

5           294. With Instagram on the rise, investors clamored for a stake. In February 2011,  
6 Instagram raised \$7 million in Series A funding from a variety of investors, including Benchmark  
7 Capital, which valued the company at around \$25 million. In March 2011, Jack Dorsey, the CEO  
8 of Twitter, pursued the idea of acquiring Instagram, and Twitter made an offer of approximately  
9 \$500 million dollars for the company. Systrom declined.

10          295. By March 2012, the app's user base had swelled to 27 million. That April,  
11 Instagram was released on Android phones and was downloaded more than one million times in  
12 less than one day. At the time, the company was also in talks to receive another \$500 million  
13 funding round.

14          296. Internally, Facebook carefully tracked Instagram's meteoric rise, including through  
15 the intelligence it received from Onavo's data collection. Instagram clearly posed a competitive  
16 threat to Facebook's dominant position, including in the rapidly expanding market for mobile-  
17 based social applications.

18          297. Unlike Instagram's streamlined approach to photo sharing, Facebook's photo-  
19 sharing was onerous. As Facebook internally recognized, mobile devices were changing how users  
20 uploaded and shared photos and it was causing severe problems for Facebook's business. As an  
21 internal Facebook presentation explained:

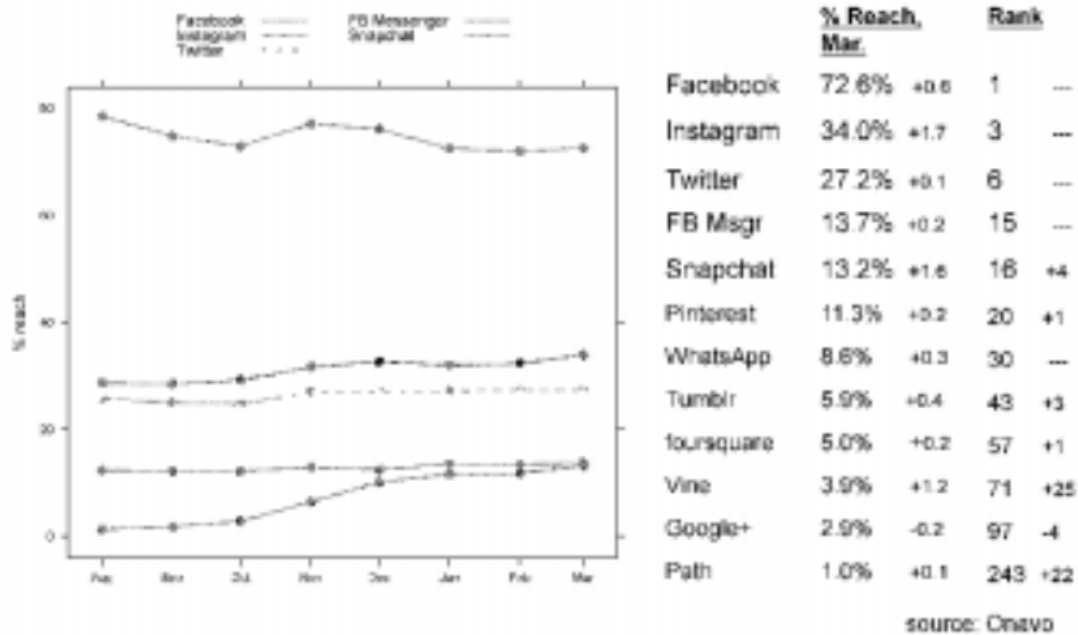
22                   Before phones, people would take their digital cameras out for  
23                   special events, vacations, etc. Then, they would post a bunch of  
24                   photos at once—after uploading them to their computer. With  
25                   phones, people take and share more photos more often. They share  
26                   them individually (rather than waiting to upload a bunch at once).

27          298. This resulted in a large drop in bulk photo uploads on Facebook's core social  
28 networking product—a 29% decline from 2012 to 2014. Facebook also observed that text posts

were “tanking” 26% because of “migration to phones with cameras.” The data was clear—Facebook had to shut down the looming threat from the new photo-sharing app. If Facebook did nothing, Instagram’s user base would imminently eclipse Facebook’s at its current growth rate,

## US mobile apps (iPhone)

US iPhone App Reach, Aug 2012 - Mar 2013 (source: Onavo)



eroding and perhaps even destroying Facebook’s SDBE. An independent app with no ties or reliance on Facebook, Instagram could become not only a competing mobile-based social app, but a social network unto itself that could rival Facebook in the amount of engagement and social data it could produce and monetize.

299. After direct talks with Mark Zuckerberg, Facebook made Instagram an offer to purchase the company for \$1 billion in April 2012, with the express promise that the company would remain independently managed. Facebook consummated the deal immediately prior to its IPO.

300. Facebook’s own Onavo data, which was obtained and published by BuzzFeed, made clear that Instagram posed an existential threat to Facebook. By February 2013, Instagram had

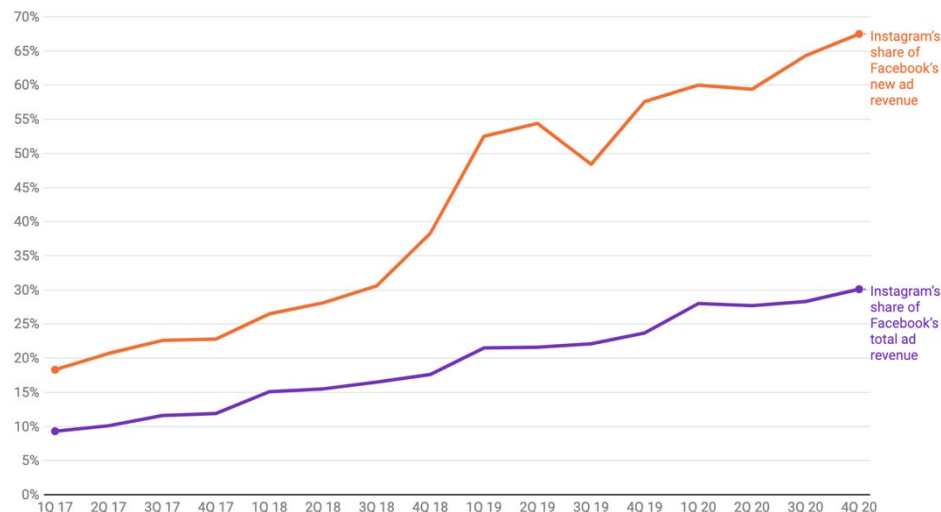
grown to 34% of the total user reach among all social apps.

301. With its Instagram acquisition, Facebook's share of mobile photo sharing app users ballooned as Facebook added Instagram's 34% user reach to Facebook's own 72% user reach.

302. Although Instagram had not at the time of the merger meaningfully monetized its user engagement and social data, Facebook quickly did so. By the end of 2013, Facebook had begun showing ads on Instagram. Since then, Instagram has become an ever-increasing proportion of Facebook's advertising revenue and a large share of Facebook's user growth.

303. In 2017, Instagram generated \$2 billion, or about 15 percent, of Facebook's \$13 billion in ad revenue.

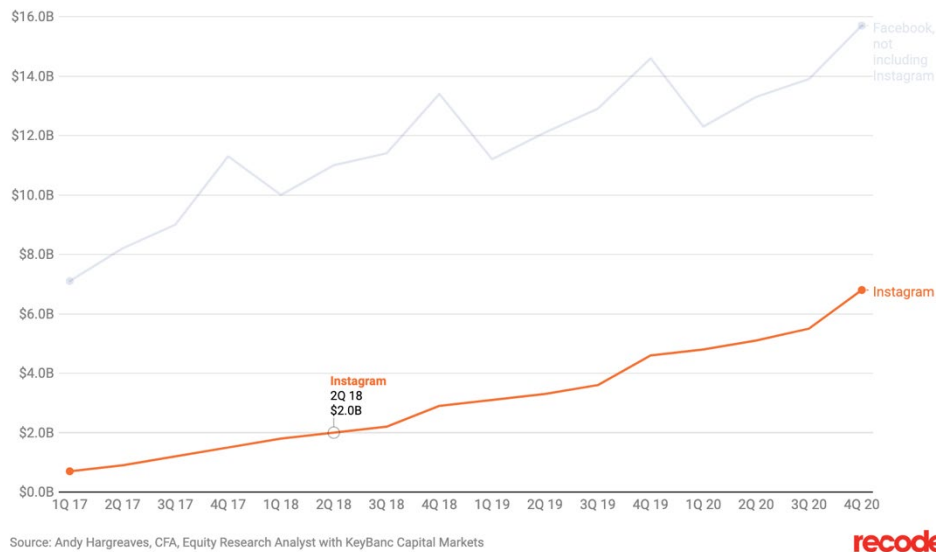
Instagram's estimated share of Facebook's ad revenue and growth



304. By the end of 2018, Instagram had a billion users and was estimated to generate \$8 billion to \$9 billion in revenue for Facebook in 2018.

305. Instagram also accounts for the bulk of Facebook's new revenue since the acquisition.

Facebook and Instagram's estimated quarterly ad revenue



306. Instagram allowed Facebook to grow its social network as Facebook's desktop and core mobile application began to stagnate. Together, Facebook and Instagram captured and monetized the social data generated across both apps.

307. The Instagram acquisition ensured that Instagram could not become a rival social network that could generate enough social data to erode the SDBE protecting Facebook's business. It also ensured that Instagram could not build and grow its own developer platform, which would threaten Facebook's scheme to dominate the Social Data and Social Advertising Markets by denying and/or leveraging social-data dependent applications' access to essential APIs. The acquisition accordingly also ensured that Facebook rivals required to enter into Whitelist and Data Sharing Agreements had no other platform choice—and thus no option but to hand over their social data to Facebook.

308. At the time of its IPO in 2012, Facebook struggled to grow its mobile product, let alone to meaningfully monetize the social data it collected through advertising. By 2019, Facebook had achieved an 83% share of the Social Advertising Market by leveraging its Instagram mobile

1 application and its Facebook mobile and desktop applications. No other company comes close in  
2 market share.

3 309. Instagram was instrumental to Facebook’s explosive growth in the Social Data and  
4 Social Advertising Markets. From the fourth quarter of 2010 until the first quarter of 2011,  
5 Facebook’s revenue was flat. From 2011’s holiday cycle to 2012’s opening three months (right  
6 before its IPO), Facebook actually *shrank*. Facebook then experienced a sudden reversal after its  
7 acquisition of Instagram, as mobile revenue began to account for a significant share of revenues,  
8 and Instagram allowed Facebook to grow with the rise of mobile applications.

9 310. Notably, Facebook’s acquisition of Instagram also allowed Facebook to exclude  
10 third-party apps that provided photo and video sharing functionality from its Platform. If an image  
11 sharing or video app contained an important feature, Facebook cloned it, thus paving the way for  
12 excluding a competitive rival from its Platform, while simultaneously taking away that rival’s  
13 share of users.

14 311. For example, when Snap, the maker of the app SnapChat, rejected Zuckerberg and  
15 Facebook’s \$3 billion offer to purchase the company and its product, Facebook flagrantly copied  
16 key features from Snap and built it into its Instagram product. Thus, when the SnapChat’s “stories”  
17 feature—which allows a user to post a connected series of images and video—rapidly grew in  
18 popularity, Instagram simply cloned it. By late 2016, Instagram had launched a product that  
19 mooted one of Snapchat’s most popular features.

20 312. Facebook’s own clunky mobile app’s clone of the “stories” feature did not have  
21 nearly the same traction with users. It was Instagram that provided Facebook the platform to  
22 compete head-on with a looming threat among social photo- and video-sharing apps. Without  
23 Instagram, Facebook would have faced direct competition. Instead, it leveraged Instagram to  
24 obtain and maintain its dominance among social mobile apps and the lucrative social data they  
25 generated.

1           313. Put simply, the acquisition of Instagram dramatically increased Facebook’s market  
2 share of the Social Data and Social Advertising Markets and strengthened the SDBE protecting  
3 Facebook’s business.

4           **C. Facebook Acquires WhatsApp.**

5           314. In February 2009, Jan Koum and Brian Acton left Yahoo and founded a new  
6 company called WhatsApp. Koum had an idea for a mobile application that displayed user statuses  
7 in an address book on a smartphone—indicating, for example, whether a user was on a call, had  
8 low battery, or was at the gym. The pair enlisted the help of a Russian developer, Igor  
9 Solomennikov, to build the app. Koum spent days writing backend code for the app to allow it to  
10 sync with any phone number in the world.

11           315. Although the app—named WhatsApp—was initially unsuccessful, a June 2009  
12 development changed everything. That month, Apple introduced “push notifications” for iPhone,  
13 allowing developers to ping app users even when they weren’t using the app. Koum immediately  
14 updated WhatsApp to ping a user’s entire network of friends when their status changed.

15           316. The feature eventually became a form of instant messaging. Because messages sent  
16 through WhatsApp instantaneously notified other users even if the phone was not running the app  
17 in the foreground, it became ideal for broadcasting messages to connections within a user’s social  
18 network, which was built on their phone’s contact list.

19           317. At the time, WhatsApp’s only significant competition for this sort of instant  
20 messaging was BlackBerry’s BBM—which was exclusive to BlackBerry’s proprietary hardware  
21 platform. WhatsApp, on the other hand, tapped into the vast network of app-enabled consumer  
22 smartphones that had emerged, particularly Apple’s iPhone.

23           318. WhatsApp continued to innovate, including by introducing a double checkmark  
24 that showed when a message was read by another user. Wanting more from text messaging,  
25 including the limited MMS protocol used by cellular networks, WhatsApp set out to build a  
26  
27  
28

1 multimedia messenger system to send messages across a social network in real time to mobile  
2 devices.

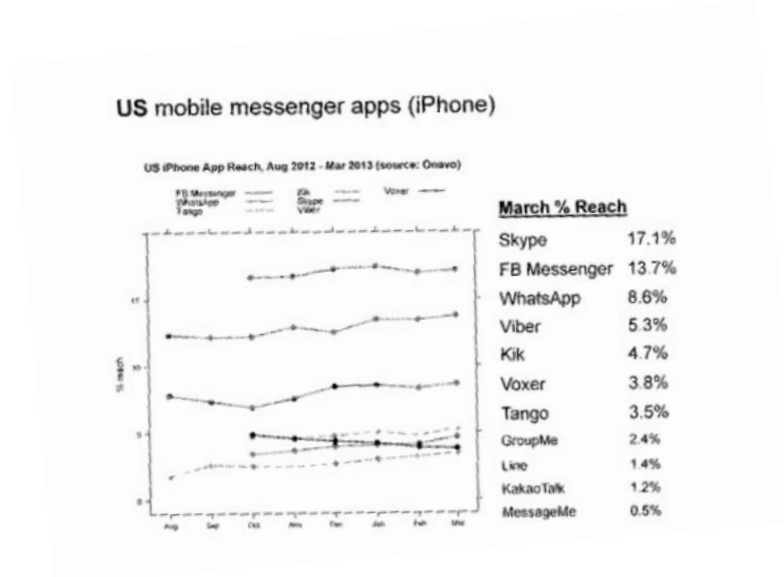
3 319. Because WhatsApp's messaging used the mobile phone's internet connection  
4 rather than text messages, the app allowed users to avoid text messaging fees entirely. In some  
5 countries, text messages through cellular providers were metered. WhatsApp's ability to send  
6 messages to any user with a phone using the internet was its most sought-after feature.

7 320. In December 2009, WhatsApp updated its app for the iPhone to send photos. User  
8 growth spiked, even when WhatsApp charged users for its service. Having created a unique  
9 combination of image and messaging apps as one socially powered app, WhatsApp decided to stay  
10 a paid service and grew while generating revenue.

11 321. By early 2011, WhatsApp was one of the top twenty paid apps in Apple's U.S. App  
12 Store. The company attracted the attention of venture capital firm Sequoia, and WhatsApp agreed  
13 to take \$8 million of additional funding in addition to its original \$250,000 seed funding.

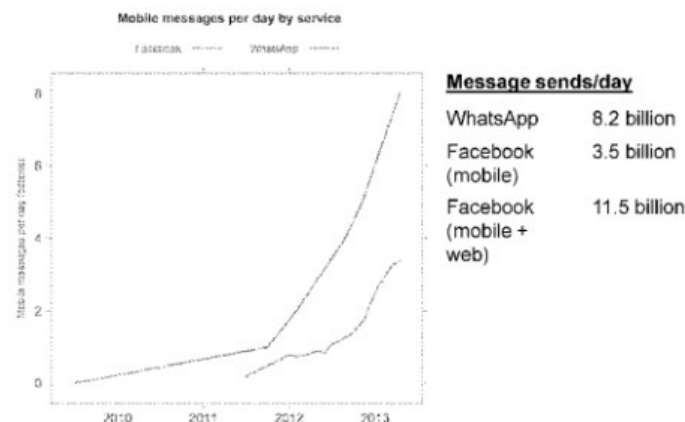
14 322. Two years later, in February 2013, WhatsApp's user base had ballooned to 200  
15 million active users. That month, WhatsApp raised additional funds—another \$50 million from  
16 Sequoia, at a valuation of \$1.5 billion.

323. Internally, Facebook had carefully tracked WhatsApp's rapid rise. Engagement data from Facebook's Onavo spyware reported that WhatsApp was rivaling Facebook's own Messenger product, and held third place in terms of user reach among mobile messenger apps for iPhone in the U.S as of April 2013.



324. The broader picture was even more threatening to Facebook. As BuzzFeed recently reported, Onavo had tracked messages sent through WhatsApp and the number dwarfed Facebook's own mobile product by more than twofold.

### WhatsApp message sends

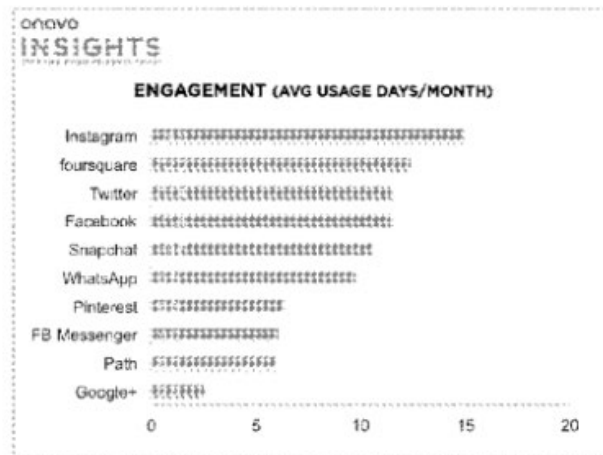




325. The same Onavo data reported by BuzzFeed showed massive engagement among WhatsApp users, placing it in fifth place behind Facebook's own core product; Facebook's newly acquired Instagram; Twitter; Foursquare; and Snapchat.

326. WhatsApp, although lacking Facebook's market reach, was drawing from the same pool of limited attention. Given Facebook's own fledgling Messenger App, WhatsApp exposed a

US mobile apps (iPhone only)



source: Onavo

massive vulnerability in Facebook's business model. WhatsApp was built on a social network derived directly from a smartphone user's contact list. It did not require Facebook's graph network for growth and could not therefore be shut down by revoking access to Facebook's APIs. Nor could Facebook demand that WhatsApp enter into a Whitelist and Data Sharing agreement.

327. WhatsApp posed a direct threat to Facebook's business, including the SDBE protecting its dominance. WhatsApp allowed for statuses, image sharing, and texting—all of the principal features of Facebook's core products. By 2013, the size of WhatsApp's network and the user engagement in that network made WhatsApp the most direct threat to Facebook's market dominance—and because of Onavo, Facebook knew it.

328. To ensure that it maintained its SDBE, and thereby its dominance of the Social Data and Social Advertising Markets, Facebook sought to remove WhatsApp as a competitor. As The Wall Street Journal reported, Facebook's Vernal internally commented in 2013: "Whats App

1 launching a competing platform is definitely something I'm super-paranoid about." Vernal  
2 understood that if WhatsApp created a rival platform, Facebook's own scheme to exclude rivals  
3 by leveraging its Platform would fail—developers would migrate to the competing platform  
4 provided by WhatsApp.

5 329. Knowing about WhatsApp's size, its engagement, and its unique potential to erode  
6 the SDBE protecting Facebook market dominance, Facebook moved aggressively to remove this  
7 existential threat from the competitive landscape. In late 2013, Facebook made an initial bid of  
8 \$16 billion in stock for WhatsApp. During negotiations in early 2014, Facebook raised its price to  
9 \$19.6 billion—adding \$3.6 billion to the original price as compensation to WhatsApp employees  
10 for staying on board at Facebook. When all was said and done, Facebook ultimately paid close to  
11 \$22 billion for WhatsApp.

12 330. But for the value of containing and shutting down the growth of WhatsApp's  
13 competing social network and platform, the transaction made no possible economic sense to  
14 Facebook. WhatsApp's revenues were a meager \$10.2 million in 2013. Its six-month revenue for  
15 the first half of 2014 totaled \$15.9 million, and the company had incurred a staggering net loss of  
16 \$232 million in that same period. Facebook had paid twenty billion dollars—thousands of times  
17 WhatsApp's revenues—to acquire a money-losing company that created software functionality  
18 Facebook itself already had as part of its own products, and could easily build from scratch for a  
19 fraction of the cost of the acquisition if it wanted to.

20 331. At the time of the WhatsApp acquisition, Facebook's user reach and user base and  
21 engagement was already massive—and unrivaled by any competing messaging app—but the  
22 addition of WhatsApp's user base further solidified Facebook's dominance in the Social Data and  
23 Social Advertising Markets. More importantly, however, Facebook had removed a serious threat  
24 to its SDBE. If WhatsApp and its nascent social platform were allowed to compete on the merits,  
25 Facebook would not have been able to leverage its Platform into continued dominance of the Social  
26 Data and Social Advertising Markets, including by using API access to shut down competing third-  
27

1 party apps and to demanding access to other apps’ most valuable social data as a condition for  
2 their existence.

3 332. Moreover, because the reach and engagement on WhatsApp generated (and  
4 generates) significant social data that Facebook could (and can) leverage and monetize through its  
5 mobile advertising channel, Facebook’s SDBE strengthened as a result of the WhatsApp  
6 acquisition, fortifying Facebook’s unrivaled dominance in the Social Data and Social Advertising  
7 Markets, and strengthening Facebook’s ability to exclude potential entrants to these markets from  
8 gaining a foothold with a rival messaging or photo-sharing app.

## 9 **VI. THE RELEVANT MARKETS**

10 333. There are two relevant markets in this case—the market for social data (the “Social  
11 Data Market”) and the market for social advertising (the “Social Advertising Market”). Both  
12 markets are protected by the Social Data Barrier to Entry described above and in this section.

13 334. Plaintiffs and members of the class are consumers, competitors, and actual or  
14 potential rivals in the Social Data Market because they produced apps that consume social data,  
15 harvest social data, and/or monetize social data. They were driven from that market when  
16 Facebook, while simultaneously coopting other sources of social data and blocking the emergence  
17 of rival platforms, withdrew access to the social data it controlled by purporting to withdraw access  
18 to the Core APIs as to Plaintiffs and the class.

19 335. Plaintiffs’ denial of access to the core APIs was also the means—the  
20 instrumentality—by which Facebook executed its anticompetitive scheme. Plaintiffs’ injuries are  
21 thus inextricably intertwined with Facebook’s anticompetitive conduct, which had the purpose and  
22 effect of obtaining and maintaining an unlawful monopoly in the Social Advertising Market.  
23 Indeed, by demanding the social data of actual or potential rivals as well as large advertising  
24 purchases in exchange for continued access to the APIs, Facebook secured a monopoly in the  
25 Social Advertising Market. As a necessary part of this scheme, Facebook removed access to the  
26  
27  
28

1 APIs as to any developer that did not accept its offered terms or as to any developer to which it  
2 made no offer for continued access to the APIs.

3 **A. The Social Data Market**

4 336. Facebook and other Social Data Market participants acquire social data from their  
5 users in exchange for the value they provide to those users. Specifically, social networks provide  
6 users with, among other things, the ability to send each other messages, signals (such as “likes” or  
7 “pokes”), photos, and video; view information about others in their network; and explore other  
8 connections among their friends. In exchange, Facebook and other social networks collect data  
9 about the interaction among users, including what they share, what they send each other, what they  
10 view or find interesting, and even their web and mobile traffic outside of the social network.

11 337. All of this data is then used by Facebook to sell targeted advertising on an  
12 advertising platform. The advertising Facebook and other social networks provide is unique. It  
13 allows fine-tuned targeting of individuals by granular attributes. To achieve the level of granularity  
14 that can provide advertisers direct access to targeted demographics, advertising based on social  
15 data requires extensive data from a social network’s users—data that a social network can only  
16 obtain when its users engage on its platform with each other or with content posted to the network.

17 338. Not all participants in the market sell or monetize social data through advertising.  
18 Some process social data to provide a service. For example, Plaintiff Lenddo consumed social data  
19 and monetized processed results by making loans; Plaintiff Beehive consumed social data and  
20 monetized it by processing it and charging third parties for identity verification and authentication  
21 services.

22 339. Put simply, Facebook—and other market participants in the Social Data Market—  
23 sell user data in some form. They obtain that data from user engagement (on Facebook or in their  
24 own applications) and sell that data to advertisers, third-party developers, or other third parties  
25 seeking a service. That is, profits in the market can be obtained by acquiring data for the least  
26  
27  
28

1 amount of value the market will bear and then selling that data (through, for example, an  
2 advertising sales channel) at a higher price.

3 340. Because social data is obtained by providing users with mostly free services,  
4 participants in the Social Data Market compete for user data based on features, the value and  
5 breadth of their network, and other non-price bases. Thus, in a competitive market, social networks  
6 compete on the merits to obtain social data by innovating with new products, providing heightened  
7 privacy to their users, or increasing the value of their overall social networks.

8 341. Because social interactions are used to target users for advertisement, the sort of  
9 data valuable to participants in the Social Data Market is data resulting from user-to-user or user-  
10 to-content interactions that reveal the preferences, affiliations, proclivities, political leanings, or  
11 other attributes of the user. Social networks that encourage users to engage with their platform can  
12 obtain such user data in a number of ways, including photo and video sharing, messaging,  
13 matchmaking, gaming, or other forms of content relying on interactions among users.

14 342. While a user's interaction with a news article, for example, may be valuable for  
15 advertising targeting, that user's decision to share that news article with his friends is the sort of  
16 social data for which participants in the Social Data Market compete.

17 343. Not all data is social data. A person's credit card statement may reveal a user's  
18 preferences and spending habits, but because that data is not shared among a network of users, it  
19 is not the sort of social data that is acquired and sold in the Social Data Market. Such data says  
20 nothing about a collection of users.

21 344. In contrast, a user's decision to like a product or share a review of a product with  
22 his friends is social data. In other words, social data arises from engagement within a social  
23 network among its users.

24 345. Message boards and video sharing sites may not be market participants because  
25 user interactions are not through a network, but instead may be broadcast for general consumption  
26  
27

1 of anyone who accesses the site. The data obtained is derived from unilateral user conduct, not the  
2 propagation of a user's actions through a network.

3 346. Social data thus generally excludes a user's financial data but could include a user's  
4 network of payments to other users. Social data generally excludes a user's search data, such as  
5 what they unilaterally enter into a search engine. Social data excludes a user's browsing history,  
6 but would include links shared with other users in a social network. The divide is not categorical.  
7 Social data excludes information that is solely about a particular user.

8 347. Social data also excludes data about a user's unilateral behavior or peculiar  
9 attributes. Login patterns, device usage, choice of operating system or web browser, and other  
10 general information about a user are generally not social data.

11 348. Social data has predictive value as to how information will propagate through a  
12 network of interconnected and interacting users. Social data, for example, is the fuel for modern  
13 machine-learning algorithms designed to predict content propagation and virality.

14 349. Facebook's Core APIs provide examples of social data, such as (a) the network of  
15 users connected as friends through, for example, first-, second-, and third-order connections;  
16 (b) the items, posts, or users that are liked, poked, or commented on by other users; (c) the contents  
17 of comments to posts on newsfeeds; (d) the extent to which a post on a newsfeed is shared among  
18 a network of users; and (e) messaging and comments among networks of users. This and other  
19 forms of social data allow machine-learning algorithms (and statistical algorithms) to deduce and  
20 predict, for example, common interests among groups and users, the virality or value of content,  
21 and the nature of relationships among users. The data can also be used to target advertising to  
22 groups of similar—or as Facebook calls them, look-alike—users.

23 350. The ability to obtain social data from users thus depends on the ability to keep users  
24 engaged on a platform because it is only generated when users in a network interact with each  
25 other and with content. A social network, such as the failed Google+ social network, for example,  
26  
27

1 obtained a large user base, but as described above, ultimately failed because users did not engage  
2 on the platform.

3 351. Because engagement is the source of the social data for which Social Data Market  
4 participants compete and which they ultimately sell through a sales channel such as advertising,  
5 services, or API access, a Social Data Market participant's share of the market is best measured  
6 by the share of active users on the social network's platform.

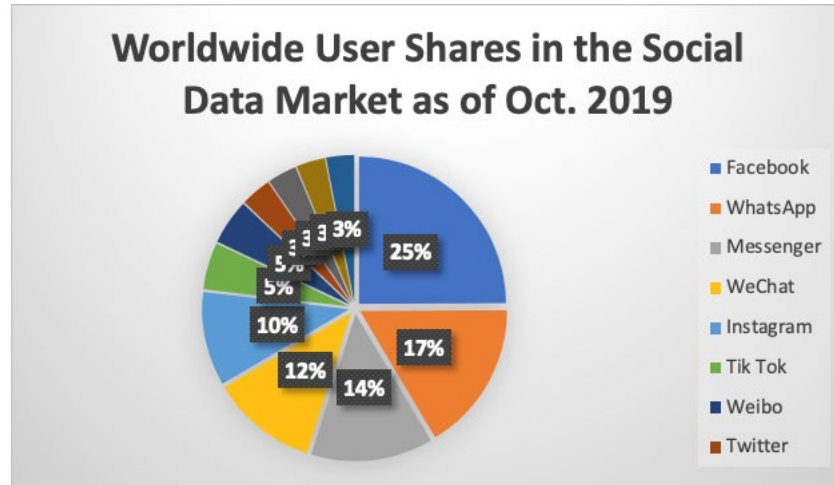
7 352. Indeed, not all participants in the Social Data Market monetize their social data,  
8 either because they have nascent businesses or because they have not yet developed a business  
9 model, but the data their network generates is valuable in the hands of a competitor capable of  
10 monetizing that data.

11 353. For such firms that compete for social data but do not—or have not yet—monetized  
12 that data through a sales channel, their share of the market can only be measured by examining the  
13 level of engagement on their platform or the extent to which their service or product is used.

14 354. Social networks can form in many contexts. As Facebook itself has recognized,  
15 messaging, photo sharing, gaming, dating, and other apps may produce social data that Facebook  
16 competes for and monetizes. Facebook thus horizontally competes with companies that produce  
17 social data in the Social Data Market, regardless of the what specific value is provided to the  
18 members of the social network, be it, for example, messaging or photo sharing.

19 355. Unlike a typical website, video streaming site (*e.g.*, YouTube), or message board  
20 (*e.g.*, reddit), wherein users post comments on content for strangers and the general public to see,  
21 a social network's value is solely in the data derived from its network—namely, from the strength  
22 and value of the specific connections among users. Thus, user networks built on friendships and  
23 familial relationships are stronger than networks of strangers with common interests. A competing  
24 entrant that can build a network of highly interrelated users can therefore create enough value to  
25 extract valuable and monetizable social data.

356. Since at least as early as 2010, Facebook has occupied a dominant position in the Social Data Market, with a user share worldwide during the relevant period of more than 60% of users on comparable social networks when user shares of its WhatsApp, Instagram, Facebook, and Messenger products are aggregated.



357. As of October 2019, Facebook's share of users worldwide, when aggregating all of its properties, including Instagram, WhatsApp, Facebook Messenger, and Facebook's core product, is approximately 66%.

358. The percentage is likely even higher once recent decisions, including executive orders, by the United States government to impair or impede companies such as TikTok and WeChat from continuing to collect and monetize social data in the United States take effect.

359. The market is highly concentrated both in the United States and globally. Using the Herfindahl-Hirschman Index ("HHI"), a metric that measures market concentration by squaring market participants' shares of the market, it is clear that the Social Data market is highly concentrated—with an HHI of approximately 4586. The Department of Justice's merger guidelines deem markets with HHIs in excess of 2500 as "highly concentrated." *See* U.S. DEPARTMENT OF JUSTICE & FTC, HORIZONTAL MERGER GUIDELINES § 5.3 (2010).

360. Of course, if Facebook never acquired those properties, the WhatsApp and Instagram shares may have been significantly higher and there may have also been more entrants

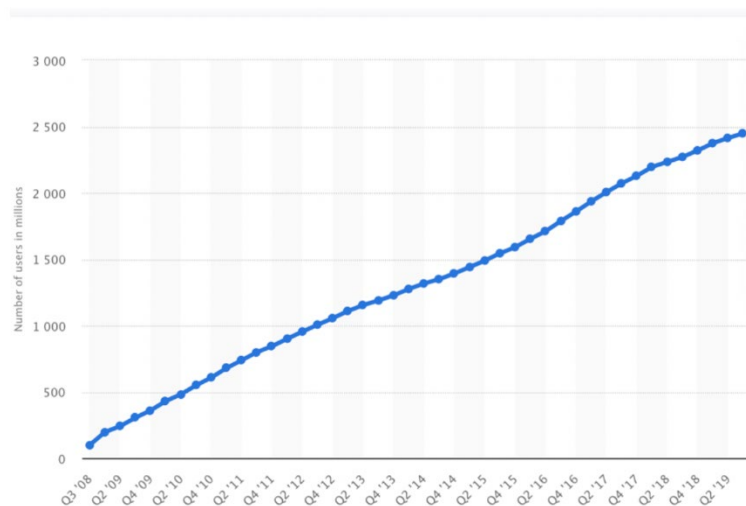


1 in the market, thus reducing concentration. Nonetheless, the contrast between HHIs before and  
 2 after aggregating Facebook's properties is striking and makes clear that Facebook has a dominant  
 3 share of the global user share in the Social Data Market.

4 361. When social networks such as WeChat—which principally serves Asian countries  
 5 with stringent regulatory schemes and high barriers for entry for non-state affiliated companies or  
 6 foreign companies—are excluded from the market, the market is even more concentrated. It is thus  
 7 notable that, on August 7, 2020, the President of the United States entered executive orders  
 8 impairing WeChat's ability to compete in the United States.

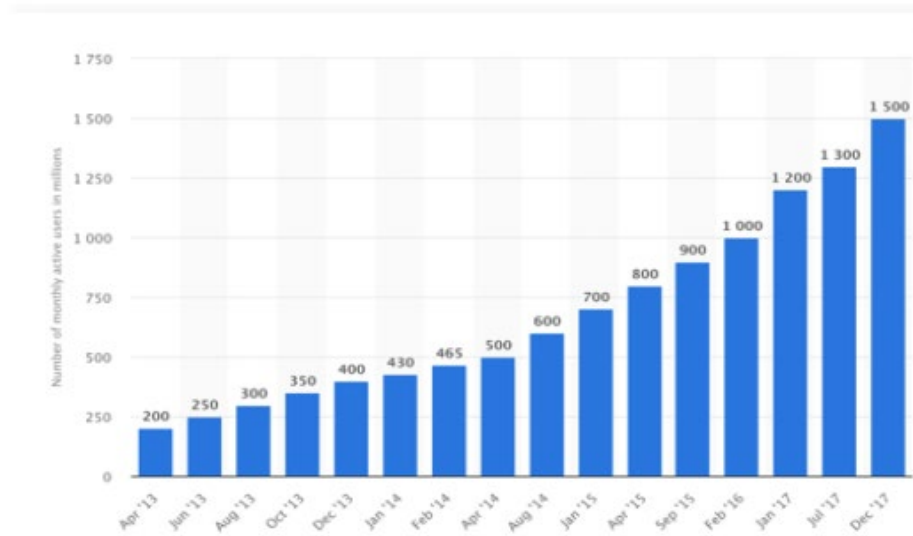
9 362. In the United States, Facebook's share of users is unquestionably dominant.  
 10 Between Facebook and Instagram, both of which are highly popular in the United States, Facebook  
 11 is virtually unrivaled and unparalleled in its share of social data generated in the Social Data  
 12 Market.

13 363. Even setting aside WhatsApp and Instagram, Facebook's core product's users have  
 14 grown in number almost monotonically every year since 2008.



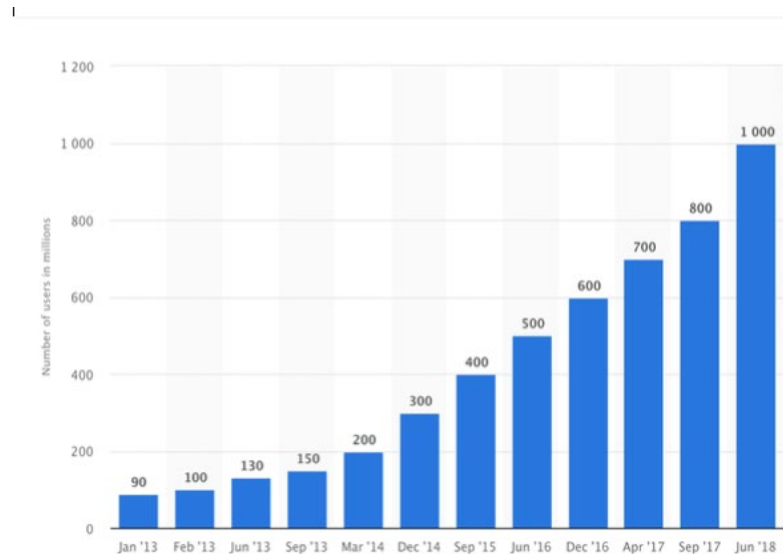
23 364. Facebook, WhatsApp, and Instagram have managed to capture not just large user  
 24 bases, but large numbers of *active* users.  
 25  
 26  
 27  
 28

365. WhatsApp's monthly active users (MAUs) have increased every year since April 2013, from 200 million MAUs to approximately 1.5 billion MAUs since 2017.



*Figure 1: WhatsApp Monthly Active Users (in millions)*

366. Instagram has grown from approximately 90 million MAUs in January 2013 to approximately 1 billion MAUs since June 2018.



*Figure 2: Instagram Monthly Active Users (in millions)*

1           367. Facebook's Messenger product has also grown rapidly in terms of MAUs, with 200  
2 million in April 2014 and more than approximately 1.3 billion since September 2017. Facebook  
3 itself has 2.7 billion MAUs in all.

4           368. That each product's user base is engaged on a monthly basis is a clear sign that each  
5 one generates staggering amounts of social data that is in proportion to its number of total users.  
6 Indeed, for Instagram, Facebook, and WhatsApp, the global number of MAUs is in line with each  
7 product's overall user share.

8           369. Facebook's competitors cannot match even one of Facebook's products. Twitter's  
9 MAUs have never exceeded 70 million since 2010 and are approximately 68 million as of Q1  
10 2019. WeChat, which has the second largest share to the Facebook's aggregated products with a  
11 share of 12% of worldwide users, has approximately 1.151 billion MAUs as of Q2 2019.

12           370. Facebook has maintained its dominance since 2010, when it emerged as the winner  
13 among social network websites such as MySpace and Friendster. It expanded its share further and  
14 maintained its dominance after its acquisitions of Instagram and WhatsApp.

15           371. Facebook consistently raised prices for social data sold through its advertising  
16 channels year after year, and there has been no competitive check to mitigate or impede those price  
17 increases.

18           **B. The Social Advertising Market**

19           372. Facebook also obtained and maintained a monopoly in the Social Advertising  
20 Market as a result of its anticompetitive (selective) withdrawal of the Core APIs. Although not all  
21 Plaintiffs and class members were participants in the Social Advertising Market, they were all  
22 injured as part of the scheme to monopolize the Social Advertising Market.

23           373. The Social Advertising Market is a submarket of online advertising, which includes  
24 banner ads, search-based ads, and advertising on social networks. Social advertising, however, is  
25 not fungible or interchangeable with these other forms of advertising. Indeed, social advertising  
26

allows advertisers to granularly target groups of users for ads by their attributes, including by the attributes of their networks.

374. Thus, because of the extensive ability to target advertisements to users on social media sites like Facebook, search and banner advertising are not reasonable substitutes.

375. Several relevant factors indicate that the Social Advertising Market is a distinct submarket of online advertising and more general advertising markets:

376. ***Industry or public recognition of the submarket as a separate economic entity.*** Social advertising is broadly considered to be distinct from other forms of advertising by market and industry participants. For example, the advertising company Outbrain describes the differences between social ads on its blog as follows:

Paid social ads are served via algorithms that define what the user might be interested in, based on past activity in their social accounts, such as likes, shares, and comments. Unlike search, which is a focused, goal-oriented activity, browsing on social is more relaxed. Think cat memes, vacation snaps, and fun quizzes. Nevertheless, the social platform has accumulated masses of data about every specific user, which can be leveraged to target specific audiences with ads that are likely to be of interest to them.

377. Outbrain explains that social ads are considered useful for a distinct purpose:

Social ads are best for targeting audience segments who may be interested in your product or services, based on a range of targeting criteria—location, age group, gender, hobbies, interests. Social networks, such as Facebook, have advanced targeting capabilities, which means you can fine-tune your targeting criteria to reach a very specific, high-quality audience.

378. Outbrain explains that search ads are different, as they “are great for targeting customers when they are already looking for you (*i.e.*, they search your company name or product), or if they are searching for a specific product, service, or piece of information that you can provide.” Outbrain also distinguishes social advertising from other forms of online advertising, like discovery advertising.

1           379. Moreover, providers of business statistics such as statista.com also provide  
2 information as to social media advertising as a distinct submarket of online and general advertising.

3           380. As another example, in March 2015, leading advertising publication AdAge  
4 referred to Facebook's Custom Audience targeting, which is unique to social advertising, as  
5 "potentially different and more special because they have this richer level of data."

6           381. Likewise, industry publication Marketing Land reported in an October 14, 2019  
7 article that media agency Zenith, which is owned by Publicis Media, predicted growth in the social  
8 media advertising segment as distinguished from search and television advertising, with social  
9 media ads coming in third behind television and paid search advertising.

10          382. Even academic articles, including those published in the *Journal of Advertising*,  
11 have analyzed the market for social media advertising as a distinct segment, with well-defined  
12 engagement characteristics.

13          383. ***The product's peculiar characteristics and uses.*** Social advertising has a distinct  
14 purpose from other forms of advertising. Social advertising has different applications than other  
15 forms of online advertising. Namely, social advertising allows granular targeting based on user  
16 attributes, user interests, and group attributes. Moreover, because of the detailed amount of  
17 information that can be collected about users as they engage on social media platforms, social  
18 advertising can seek out other users with similar behavioral characteristics.

19          384. Facebook, for example, describes its own targeting capabilities as follows:

20               Facebook ads can be targeted to people by location, age, gender,  
21               interests, demographics, behavior and connections. You can also use  
22               more advanced targeting tools like Lookalike Audiences, which lets  
23               you target people similar to the people who already engage with  
                your business, or you can layer your targeting options to select a  
                more specific audience.

24          385. Facebook allows advertisers to create Lookalike audiences. Thus, unlike search or  
25 other forms of advertising where the ad is created and placed to reach a preexisting audience,  
26 Facebook is able to algorithmically combine a subset of its users to fit an advertisement. This  
27 capability is unique to social advertising.

1           386. As Facebook explains on its website:

2           When you create a Lookalike Audience, you choose a source  
3           audience (a Custom Audience created with information pulled from  
4           your pixel, mobile app, or fans of your page). We identify the  
5           common qualities of the people in it (for example, demographic  
6           information or interests). Then we deliver your ad to an audience of  
7           people who are similar to (or “look like”) them.

8           387. Because of the level of granular data Facebook collects from its users, it can provide  
9           targeting flexibility like no other advertising medium. As Facebook explains:

10           You can choose the size of a Lookalike Audience during the creation  
11           process. Smaller audiences more closely match your source  
12           audience. Creating a larger audience increases your potential reach,  
13           but reduces the level of similarity between the Lookalike Audience  
14           and source audience. We generally recommend a source audience  
15           with between 1,000 to 50,000 people. Source quality matters too.  
16           For example, if a source audience is made up of your best customers  
17           rather than all your customers, that could lead to better results.

18           388. Social advertising is also marked by the ability to algorithmically refine advertising  
19           targeting as users interact with the ads. For example, Facebook allows users to place a pixel on  
20           their website that is pulled off Facebook’s servers when the site is accessed. Facebook is thus able  
21           to determine the efficacy of ads run on Facebook once the user transitions to an advertiser’s own  
22           website. Over time, Facebook’s advertising becomes more targeted and more effective in terms of  
23           particular advertising goals, such as lead generation or online purchases.

24           389. Other social networks, such as Twitter, provide similar targeting abilities. Twitter,  
25           for example, allows targeting based on location, language, device, age, and gender, but also allows  
26           for the targeting of audience types, including algorithmically tailored and custom-created  
27           audiences.

28           390. These targeting features, which are available on social advertising platforms, are  
not comparably available as part of other forms of online advertising, such as display and banner  
ads or search ads.

1           391. **Unique production facilities.** Social advertising requires data collected from users  
2 on an inherently social application. A user's search history, for example, will not provide enough  
3 data to create highly targeted advertising features, such as Facebook's Lookalike Audiences.  
4 Likewise, passive advertising, such as banner ads, or even general magazine or publication ads,  
5 provides little granular data that can then be used to further refine the targeting of advertising.

6           392. Providers of social advertising require specialized means of production because  
7 they must rely on data harvested from engagement among networks of users to facilitate highly  
8 targeted advertising. Platforms capable of delivering social advertising must therefore provide  
9 functionality such as image and video sharing, messaging, matchmaking, content sharing, and  
10 other inherently social features in order to obtain the data needed to allow for granular user and  
11 user network targeting.

12           393. Because social advertising allows iterative refinement of target audiences, a  
13 provider of social advertising must employ machine-learning or artificial intelligence algorithms  
14 that are trained on data collected from users as they interact and engage with content and  
15 advertising. As Facebook's head of its Applied Machine Learning Group, Joaquin Quiñero  
16 Candela told Wired magazine (emphasis in original):

17                   *Facebook today cannot exist without AI.* Every time you use  
18 Facebook or Instagram or Messenger, you may not realize it, but  
19 your experiences are being powered by AI.

20           394. Other forms of advertising generally do not require sophisticated machine learning  
21 or artificial intelligence. For years prior to the advent of modern machine learning techniques,  
22 search engines such as Yahoo and Google used far less sophisticated algorithms to match user  
23 searches with suggested websites and, in turn, advertisements. Traditional advertising, such as  
24 magazine or television ads, require no algorithms at all, let alone artificial intelligence.

25           395. **Distinct customers.** Social advertising customers are distinct from search  
26 advertisers and passive display advertisers. Moreover, social advertising is generally more  
27 effective at targeted advertising rather than reaching a massive number of people.

1           396. Customers advertising on search engines are generally seeking priority among the  
2 search results returned given a particular keyword. Customers advertising on social media  
3 platforms are searching for users that fit a particular, predefined profile or set of characteristics.  
4 Small businesses that do not generally have the budget to bid on coveted search results are  
5 nonetheless able to bid on granularly defined audiences on a social media platform like Facebook.

6           397. *Distinct prices and sensitivity to price changes.* Social advertising prices are  
7 distinct from other forms of advertising. In search-based advertising, certain search keywords are  
8 bid up by many advertisers seeking to have their ads displayed as part of search results. This means  
9 that prices in certain categories, such as legal or home improvement, will be significantly higher  
10 on search-based platforms than on social advertising platforms like Facebook. For example, legal  
11 ads are on average \$1.32 on a cost-per-click basis on Facebook, whereas they are \$6.75 on a cost-  
12 per-click basis on the Google Ads platform. Likewise, consumer services ads are on average \$3.08  
13 on a cost-per-click basis on Facebook's platform vs. \$6.40 on Google Ads.

14           398. Because bidding on Google Ads and other search-based advertising is zero sum,  
15 meaning only a certain number of ads can be coupled with a particular set of search keywords,  
16 pricing is more sensitive to changes in demand.

17           399. Social advertising, however, allows granular targeting, avoiding much of the zero-  
18 sum nature of other forms of advertising bidding. Moreover, social advertisers like Facebook can  
19 tailor audiences, reducing the likelihood that advertisers will have to compete for the same display  
20 opportunity at any given point in time.

21           400. Other general forms of advertising such as television and print are even more zero-  
22 sum, as there are limited time slots or available pages in a newspaper or magazine. Pricing is thus  
23 more sensitive to demand in these forms of advertising.

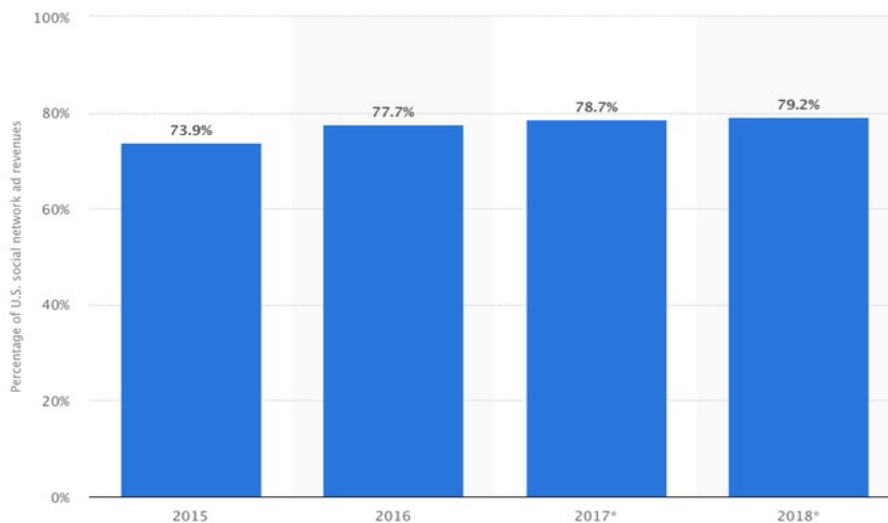
24           401. Social advertising is thus entirely distinct. Because of the ability to target audiences  
25 to advertising, pricing is proportional to the generality of the targeting, not simply to the general  
26 demand for a limited search term, key word, or periodical placement.



402. Moreover, Facebook has been able to consistently raise its prices in almost every year it has sold advertising without facing price pressures from competitors. On a cost per mille (CPM)—or cost per thousand advertising impressions—basis, Facebook’s advertising prices grew 90 percent year over year according to a report at the end of 2019. In 2018, Vox reported that CPM prices on Facebook had increased 122 percent year over year. In 2017, Facebook’s CPMs increased 171%. Facebook raised prices in prior years as well.

403. ***Specialized vendors.*** The Social Advertising Market has its own distinct and specialized vendors, namely advertising agencies such as Lyfe, Thrive, Volume Nine, Sociallyin, and Firebelly Marketing, all of which boast a specialization in social media advertising and provide specialized social media management products. There are many such specialty advertising agencies that specialize in creating social media advertising campaigns. Moreover, specialized social media analytics vendors also exist, such as Socialbakers, which provides aggregated analytics across social media platforms. There is an entire ecosystem of vendors specializing in social advertising—an indicator that the Social Advertising Market is its own distinct submarket of online advertising, requiring its own unique tools and expertise.

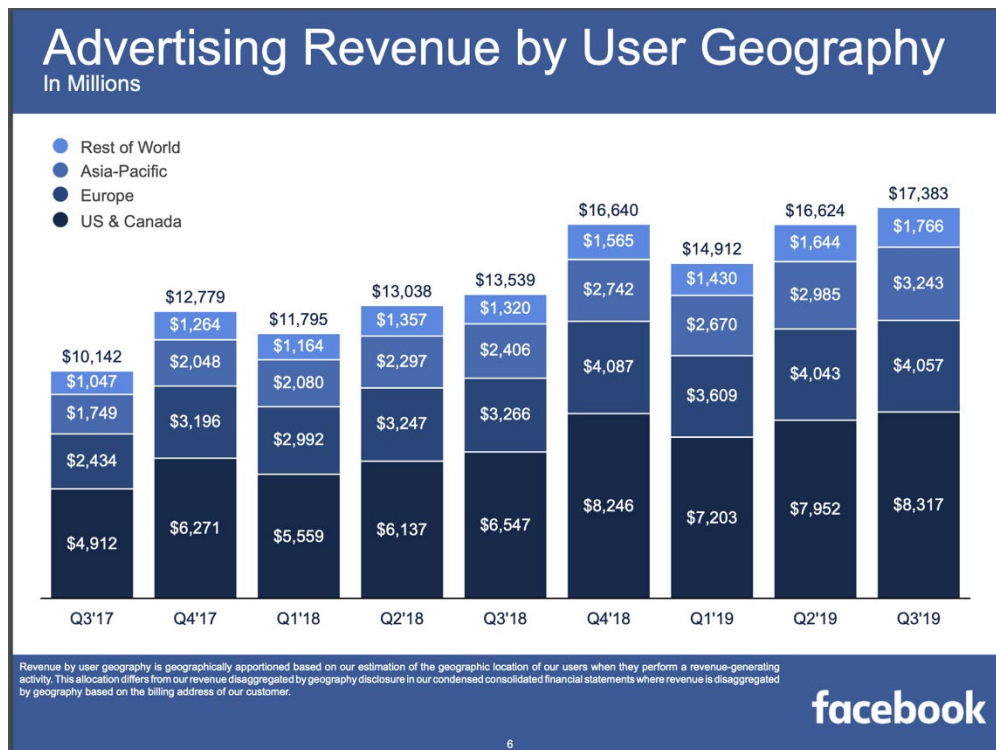
404. Facebook’s revenue share of the Social Advertising Market is approximately 80%. Its share has been above 70% since 2015.



405. Facebook's advertising revenue has steadily grown both in the United States and globally. Facebook reported advertising revenues totaling \$17.383 billion as of Q3 2019. Approximately \$8.3 billion of that advertising revenue came from the United States.

406. From 2014 to 2016, Facebook's advertising revenues grew from \$2.9 billion to \$6.436 billion. During that period, and even before then, Facebook was one of the few social networks that significantly monetized its network by selling advertising. Other competitors did not come close, and Facebook established unrivaled dominance in the Social Advertising Market and maintains that dominance to this day.

407. Twitter, one of Facebook's only competitors to sell significant social advertising during the same period Facebook generated revenue in the Social Advertising Market, has never exceeded \$800 million in advertising revenues. Revenues in Q1 2012 were approximately \$45 million, growing to \$432 million in Q4 2014, and standing at \$702 million as of Q3 2019.



1           408. LinkedIn, another competitor that sells social advertising, generated roughly \$2  
2 billion in overall annual revenue by the end of 2018, with some portion of that coming from  
3 advertising.

4           409. Considering the revenue generated by LinkedIn and Twitter, Facebook's  
5 advertising revenue accounts for approximately 86% of the total revenue share across the three  
6 largest firms competing in the Social Advertising Market. Excluding the contributions from minor  
7 competitors that monetize their social networks, the HHI of the Social Advertising Market is  
8 approximately 7,685, well beyond what the DOJ considers a highly concentrated market.

9           **C. Barriers to Entry**

10          410. Both markets are protected by the Social Data Barrier to Entry that prevents  
11 Facebook's competitors from entering the market. Without a critical mass of social data, market  
12 participants in both the Social Data and Social Advertising Markets cannot generate revenue.

13          411. Moreover, without adequate social data and engagement with the social network,  
14 market participants cannot display content to users that would provide enough value to generate  
15 engagement and additional social data.

16          412. Likewise, without a critical mass of social data, advertising targeting will not be  
17 possible or will be substantially diminished in effectiveness, thus reducing revenues in the  
18 advertising sales channel of the Social Data Market and social advertising revenue in the Social  
19 Advertising Market.

20          413. A firm's market power in both markets therefore depends on obtaining a critical  
21 mass of social data. Because of network effects, users will not use a social network that lacks  
22 enough social data to provide targeted content or to provide valuable connections to other users.  
23 However, once a certain amount of social data is obtained by a market participant, a feedback loop  
24 may form as a result of network effects, further increasing the amount of social data generated by  
25 the social network.

1           414. A new entrant must therefore expend significant amounts of investments in capital,  
2 technology and labor to create a network large enough to create the network effects necessary to  
3 compete with dominant firms in the market.

4           415. Because of the large amount of capital and social data required to successfully enter  
5 the Social Data and Social Advertising markets, the SDBE effectively excludes entry by a new  
6 competitor, even a well-funded one. Indeed, the SDBE prevented Google from successfully  
7 entering both the Social Data and Social Advertising markets with its Google+ social networking  
8 product.

9           416. Although Google+ had successfully replicated Facebook's core functionality and  
10 even added additional functionality to its software, its entry failed because it lacked the critical  
11 mass of Social Data that is required to reverse the network effects protecting Facebook. Without  
12 that critical mass, users will not incur the costs of switching from Facebook's social network to a  
13 new entrant's social network. That is, a new entrant will not be able to provide a valuable network  
14 of engaged users upon entry to justify a Facebook user to change social networks.

15           417. That is precisely what happened to Google. Although it had a massive user base, it  
16 lacked engagement, which meant it did not provide a sufficient amount of social data that could  
17 be used to target content and advertising to users. This, in turn, reduced the value of the entrant  
18 social network and accordingly the attraction of switching from Facebook's social network to  
19 Google's.

20           418. The SDBE continues to reinforce Facebook's dominant position. In fact, by  
21 excluding rivals and potentially competing social networks through the anticompetitive scheme  
22 described in this Complaint, Facebook strengthened the SDBE, providing it a larger share of social  
23 data and a stronger monetization channel through social advertising. The additional amount of  
24 social data increases the value of its network, and the revenue from social advertising increases  
25 the cost of entry for a new rival.

1           419. Other barriers to entry in both the Social Data and Social Advertising Markets  
2 include, but are not limited to, the high cost of development, data management, talent acquisition  
3 and retention, server infrastructure, development infrastructure, software technology, software  
4 libraries, and a brand and marketing presence sufficient enough to attract an engaged user base.

5           420. In certain countries in the global markets for Social Data and Advertising Markets  
6 (described below), regulatory barriers to entry may exist in the form of government surveillance  
7 and other monitoring, government content restrictions and prior restraints on speech, and onerous  
8 or complex regulatory schemes. A new entrant would be required, for example, to ensure  
9 compliance with EU data privacy laws, which may require it to incur high entry costs, particularly  
10 for entry at scale.

11           **D. Relevant Geographic Markets**

12           421. There are two relevant geographic markets for the Social Data and Social  
13 Advertising product markets: the U.S. and global Social Data and Social Advertising Markets.  
14 Both markets can be viewed in the alternative as U.S. markets or as markets extending across  
15 several countries.

16           422. For the Social Data Market, social data must be compatible with the customers  
17 purchasing that data. Thus, social data about a foreign market may be of little use for a U.S.-based  
18 advertiser. The data may be collected in a different language, may involve interests more pertinent  
19 to a particular geographic region (*e.g.*, American Football vs. Rugby), and may contain a  
20 demographic of users that share a common culture or merely a close proximity.

21           423. The same is true for the Social Advertising Market. An advertiser seeking to sell  
22 products designed for consumption in the United States may not have any use for a platform's  
23 advertising targeting capabilities outside of the United States. In the U.S., Facebook enjoys higher  
24 market shares of the Social Advertising Market than the global shares described above. Thus,  
25 Facebook enjoys an even more dominant share of the U.S. Social Advertising Market than it does  
26 globally.

1           424. In the U.S., Facebook’s market share of the Social Data Market is even greater than  
 2 its global market share. Services such as WeChat are geared towards Asian markets, particularly  
 3 China, and do not generally compete in the U.S. market with Facebook’s Messenger, Instagram,  
 4 and core social networking product. Thus, Facebook’s U.S.-based market share is even higher than  
 5 its global market share referenced above, which is already a dominant share of the market.

6           425. In the global markets, Facebook’s product does not face competition in every  
 7 country, and not every country is part of the market. Certain countries, such as Russia, China, Iran,  
 8 and North Korea have extensive Internet monitoring and restriction programs run by governmental  
 9 or quasi-governmental entities. Because of regulation in these countries, no social network is free  
 10 to enter those markets and compete on the merits. Those countries, and others like them, are  
 11 therefore not part of the Social Data Market or Social Advertising Market. Indeed, it may be  
 12 unlawful for Facebook to monetize social data or social advertising in those countries.

## 13       **VII. HARM TO COMPETITION AND ANTITRUST INJURY**

14           426. Facebook’s anticompetitive scheme had the purpose and effect of monopolizing  
 15 the Social Data and/or Social Advertising markets in the United States and/or globally. Facebook’s  
 16 conduct allowed it to maintain the monopoly and market power it had obtained by 2010 in the  
 17 Social Data and Social Advertising Markets (the “Relevant Markets”), and/or Facebook intended  
 18 and attempted to acquire such a monopoly through its anticompetitive scheme.

19           427. Specifically, Facebook engaged in a series of acts in furtherance of its scheme,  
 20 including, but not limited to: (a) the removal of important and necessary APIs from its Facebook  
 21 Platform for the intended purpose of destroying competition in the Relevant Markets; (b) the  
 22 targeting of competitors for coercive Whitelist and Data Sharing Agreements on pain of denial of  
 23 access to Facebook’s Platform and APIs; (c) the use of secret surveillance software to identify and  
 24 destroy potential competitive threats; (d) the acquisition of rivals with the purpose and effect of  
 25 strengthening the SDBE and increasing Facebook’s market share and market power in the Relevant  
 26  
 27  
 28

1 Markets; and (f) misleading developers about the stability of Facebook's Platform to induce them  
2 to become dependent on Facebook's social data.

3 428. Facebook engaged in this conduct while possessing, and/or acting intentionally to  
4 obtain, market power in both the Social Data and Social Advertising Markets, both in the United  
5 States and globally. Facebook enhanced and/or maintained its market power and monopoly  
6 through this scheme and then used it to exclude rivals and potential entrants. Facebook's  
7 anticompetitive scheme also reduced consumer choice by stifling innovation among nascent and  
8 established competitors that relied on Facebook's Platform for their products and business and by  
9 entering into agreements that strengthened the SDBE.

10 429. In the alternative, Facebook's scheme had the purpose and effect of achieving a  
11 dangerous probability of a monopoly in the U.S. and/or global Social Data and Social Advertising  
12 Markets.

13 430. Facebook's decision to remove the Friends and News Feed APIs excluded  
14 horizontal and/or direct competitors and rivals from the Social Data Market. Once a potential threat  
15 to Facebook or Facebook's SDBE is eliminated, it cannot (a) monetize social data by selling  
16 advertising; (b) accumulate social data sufficient to create a competing platform; and/or (c) even  
17 purchase social data from Facebook at full price.

18 431. That same decision allowed Facebook to monopolize and/or maintain a monopoly  
19 in the Social Advertising Market. Facebook's scheme allowed it to force developers on its Platform  
20 that it had selected for continued access to the Core APIs to buy large amounts of advertising on  
21 its struggling mobile platform, NEKO. At the same time, the demand for data in exchange for  
22 continued access, including from competitors such as Pinterest and Foursquare, ensured that no  
23 rival social advertising platform could emerge—Facebook would have a superset of all of their  
24 users' data. In order to execute this scheme of exclusive access in exchange for advertising and  
25 revenue, Facebook necessarily had to discontinue access to the rest of the developers on its  
26 platform, including those that did not acquiesce to its demands. Thus, the injury to the excluded  
27

1 developers, including Plaintiffs and the class members, is inextricably intertwined with the  
2 anticompetitive conduct at issue here and with the scheme. The removal of the APIs and  
3 destruction of the Plaintiffs' and class members' businesses was the instrumentality for the  
4 anticompetitive scheme. The effect was that Facebook dominated the Social Advertising Market,  
5 gaining a monopoly share and sufficient market power to consistently and dramatically raise prices  
6 year after year.

7 432. Facebook sacrificed short-term profits in the Social Data and Social Advertising  
8 Markets for the sole purpose of executing its scheme and excluding competition. It would make no  
9 rational sense to exclude a competitor that would also be a purchaser of social data or social  
10 advertising if they were permitted to exist. It would also make no sense to exclude a third-party  
11 app that Facebook could have charged for API or social data access. Put simply, Facebook put the  
12 prospect of long-term dominance ahead of short-term profit.

13 433. Facebook knew that once its competitors were foreclosed from the Social Data  
14 and/or Social Advertising markets by its anticompetitive scheme, Facebook would be free to  
15 charge monopoly prices for social data and social advertising without facing any competitive price  
16 or quality pressure. In fact, Facebook has reduced the value it provides to users through privacy  
17 and feature innovation throughout and after it executed its anticompetitive scheme without  
18 sacrificing any significant marginal demand—a clear sign of its market power in the Social Data  
19 and Social Advertising Markets. Likewise, Facebook has increased the price of its targeted  
20 advertising throughout the period of its anticompetitive scheme and to the present, also a sign of  
21 its market power in the Social Data and Social Advertising Markets.

22 434. Facebook's Whitelist and Data Sharing agreements ensured that Facebook would  
23 control competitive threats to its platform and extract their most valuable asset—their social data.  
24 Facebook, by requiring Whitelist and Data Sharing agreements by competitors, ensured that these  
25 competitors, some of which were competing social networks, could not become alternative  
26  
27  
28



1 platforms for developers. That meant that when Facebook excluded other developers from the  
2 market, they were completely foreclosed and would have no reasonable alternative.

3 435. After excluding applications that competed with it from the Social Data and/or  
4 Social Advertising Markets, Facebook was left with competition from entirely independent apps,  
5 which did not rely on Facebook's social data, APIs, or advertising. Rather than compete on the  
6 merits with these competitors, Facebook secretly spied on users using the Onavo data and the  
7 Onavo assets that it acquired to target potentially competitive threats and then acquired the  
8 companies that built the threatening products, even at economically irrational prices.

9 436. Facebook accordingly used the Onavo data and Onavo-based spyware it owned or  
10 had in its possession to track Instagram use. When Instagram's engagement and user reach  
11 indicated that it was a potential competitive threat to Facebook, Facebook acquired Instagram and  
12 operated it alongside its products, and presently seeks to complete integration of the product with  
13 all of its other Facebook properties.

14 437. Likewise, Facebook secretly tracked mobile users' use of WhatsApp, and when  
15 Facebook determined that WhatsApp threatened to become a platform entirely independent of  
16 Facebook's network and social data, it purchased WhatsApp at an irrational price of thousands of  
17 times the company's revenue.

18 438. By acquiring potential threats independent of its platform, particularly WhatsApp  
19 and Instagram, Facebook ensured that such companies could not be (a) alternative platforms upon  
20 which developers excluded by Facebook's API removal could build their apps; (b) alternative  
21 sources of social data that could be monetized; or (c) alternative social networks that would attract  
22 users, developers, and advertisers, thereby weakening the SDBE protecting Facebook's business.

23 439. Facebook's past integration of these acquired assets and its continuing effort to  
24 integrate these acquired assets has continuing anticompetitive effect and threatens to increase  
25 and/or maintain Facebook's dominance in the Social Data and Social Advertising markets.  
26  
27  
28

1           440. Facebook also used Onavo and the Onavo assets to maintain a real-time view of  
2 users' mobile application use and mobile traffic. Facebook used that real-time information to  
3 monitor, punish, or acquire any competitive threats. Indeed, Facebook used Onavo surveillance  
4 data to target threats for denial of access to crucial APIs; for Whitelist and Data Sharing  
5 Agreements; or for targeted removal from the market through acquisition.

6           441. The net effect of Facebook's scheme was to, *inter alia*, strengthen and maintain the  
7 SDBE, protect its monopoly in the Relevant Markets, prevent market entry by a potential rival,  
8 and reduce consumer choice.

9           442. The scheme also ensured that there would be no competition by a rival social  
10 network or application on non-price bases, such as, for example, increased privacy, more features,  
11 higher quality features, new features, more valuable social connections, reduced advertising to  
12 users, or new use cases. The scheme also foreclosed new or alternate business models by  
13 competitors or potential competitors, including the business model Facebook itself forwent and  
14 sacrificed for anticompetitive purposes—charging developers and competitors for API / Platform  
15 access or advertising.

16           443. Facebook's anticompetitive scheme has also allowed it to raise prices for social  
17 data and for social advertising during and after the execution of the scheme. Facebook continues  
18 to be one of the only sources for targeted social data or advertising in the United States and in most  
19 of the world. As evidence of its market power in the Social Data and Social Advertising Markets,  
20 Facebook has raised prices for social data without sacrificing any demand.

21           444. Facebook's anticompetitive scheme excludes developers, including Plaintiffs, from  
22 the Relevant Markets; prevents entry by a competitor in the relevant markets; and strengthens the  
23 SDBE protecting Facebook's business.

24           445. Plaintiffs are therefore harmed in their business and property because they have  
25 been excluded from the Relevant Markets; had their business and assets destroyed by Facebook's  
26 anticompetitive scheme; and are presently, as a result of Facebook's exclusionary conduct,  
27

1 prevented from entry/reentry in the Relevant Markets or from staging an entry that could threaten  
2 Facebook's dominant position in the Relevant Markets.

### 3 **CONCEALMENT AND TOLLING**

4 446. Until no earlier than November 6, 2019, Plaintiffs did not know, and could not  
5 reasonably have known, the truth about Facebook's anticompetitive conduct, including its purpose  
6 and intent to engage in anticompetitive conduct, as alleged in this Complaint.

7 447. As set forth below, Facebook, its executives, officers, and senior employees  
8 affirmatively acted to prevent the disclosure of the truth, including through (a) enforcing a strict  
9 code of silence within the organization, (b) preventing disclosure to developers during and after  
10 the scheme, (c) continuing to evangelize the Core APIs knowing that they were slated for removal  
11 for competitive reasons, and (d) misleading developers about the reasons for the removal through  
12 pretextual explanations, including by falsely stating that the APIs were being removed to provide  
13 users more control over their data or out of concern for user privacy. This conduct individually  
14 and taken together ensured that the levee would not break and that developers would not pursue  
15 claims for fraud or anticompetitive conduct.

16 448. In fact, the levee did not break for years. It was not until internal documents came  
17 to light revealing the true, non-pretextual reasons for the purported removal of the APIs as well as  
18 the lack of legitimate technical or business purpose for the purported removal.

19 449. As detailed below, Plaintiffs exercised reasonable diligence when they investigated  
20 Facebook's conduct.

#### 21 **A. Facebook Made False Statements About the Availability of the API** 22 **Functionality and Omitted from Those Statements that Facebook Had** 23 **Internally Decided to Remove the APIs.**

24 450. During the period from September 2011 through April 2014, Facebook repeatedly  
25 told developers that the functionality of the Core APIs as well as other functionality removed in  
26 April 2015 was available to them to be used as part of their applications. These false statements,  
27  
28

1 omissions, and half-truths created a duty to speak fully and truthfully. As explained below,  
2 Facebook never did so—not even after it removed the Core APIs from its Platform.

3 451. During training sessions, hackathons, meetups, and conferences, many of which  
4 were posted on Facebook’s YouTube channel, Facebook’s employees and executives evangelized  
5 the Core APIs to developers. Facebook did so to ensure that developers would not learn of the  
6 truth—that Facebook had internally begun the process of auditing apps to be slated for destruction.  
7 If the truth were known, developers would have fled the platform, destroying Facebook’s ability  
8 to anoint winners in various app categories and to destroy their actual and potential competitors  
9 by exploiting their reliance on the platform. For example

10 (a) On June 20, 2012, Cox presented the Ticketmaster app as a case study for what  
11 developers could do on Facebook’s platform. Specifically, Cox noted that the  
12 Ticketmaster app would allow users to see “which night your friends were going to the  
13 concert,” but the very API this app would have relied on was slated for deprecation  
14 with respect to any developer that would not ultimately enter into an agreement with  
15 Facebook for data or advertising.

16 (b) On October 20, 2013, Zuckerberg gave a speech that touted photo sharing by developer  
17 apps and stated that it was an opportunity for developers to monetize their apps. The  
18 APIs that were required for such an app, however, had already been restricted as of the  
19 date of his statements. During the same speech, Zuckerberg claimed that developers  
20 would have access to user photos for their own apps, but at the time he made the  
21 statement, Facebook had already planned to remove that functionality from its  
22 platform.

23 (c) On February 28, 2013, in a developer video published on Facebook’s YouTube  
24 channel, entitled “Getting started with Facebook SDK for iOS,” Facebook’s Product  
25 Manager of the Mobile Platform, Eddie O’Neil, taught developers how to build  
26 applications that access a user’s friends’ data by building one with the developers in  
27

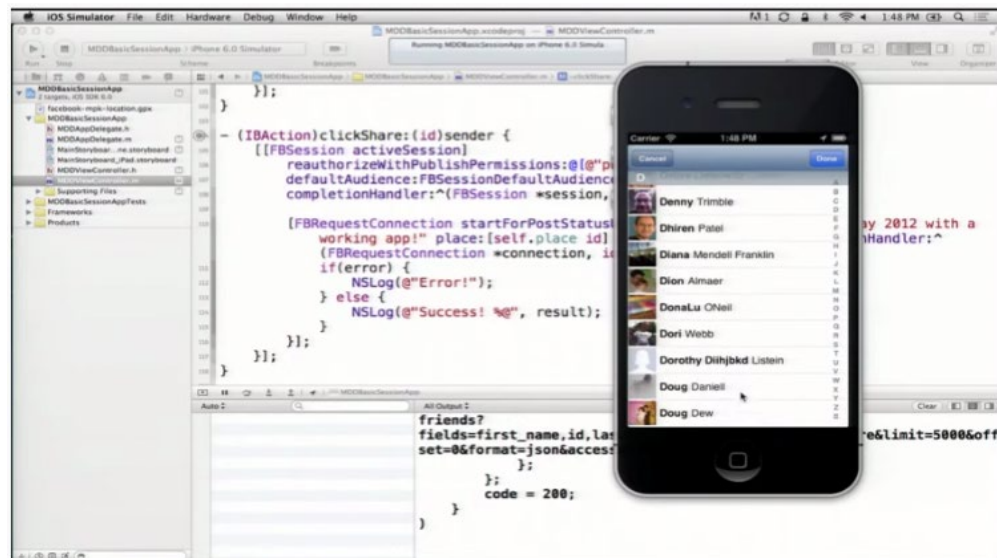
1 the audience. He showed how to make a request to “get back photo albums from five  
2 friends” and then towards the end shows the finished application stated: “Here are all  
3 my friends . . . As I scroll here, you see that we haven’t brought all the friend pictures  
4 in yet, but as we bring them in we’ll stick them in that cache and hold on to  
5 them . . . when we come back to display this it’s instantaneous,” meaning that the app  
6 can show all the friends’ photos in as single request to make it very easy for developers  
7 to use this data in their applications. The presentation, including statements about the  
8 demonstrated functionality, was false and misleading, as Facebook had internally  
9 already begun the process of removing the very functionality that was being  
10 evangelized.

11 (d) At a developer conference in Moscow, which was posted on Facebook’s developer  
12 YouTube page on February 28, 2013, and entitled “Introduction to the Facebook  
13 Platform,” Simon Cross of Facebook demonstrated the use of several of the APIs,  
14 including the Friends and News Feed APIs that were slated for removal by Facebook  
15 at the time of the demonstration and while the presentation remained on the YouTube  
16 developer page. Cross never mentioned Facebook’s internal plans to remove the very  
17 functionality he advertised to developers. If he had told the truth, developers would  
18 have fled the platform and Facebook’s anticompetitive scheme would have unraveled.

19 (e) At the same February 28, 2013 conference, another Facebook employee, Tom Elliot,  
20 demoed the publishing of information from a mobile app to a user’s timeline as well as  
21 to the timeline of a user’s friends, noting that Facebook’s Graph API allowed posts  
22 from a mobile app “on the timeline of the user and the news feed of the friend of the  
23 user—these are people who have never used your app before.” This is precisely the  
24 functionality that would require the Friends and News Feed APIs, yet Facebook and its  
25 employees never once mentioned that they were internally planning to remove that  
26 functionality with respect to certain apps that either (i) did not provide advertising or  
27

data to Facebook in exchange for continued use or (ii) were slated for destruction after Facebook's audit of apps on its Platform.

- (f) At Facebook's Mobile Developer Day in November 2012, Facebook again evangelized the ability to use the Friends and News Feed APIs as part of mobile applications. Indeed, the presentation displayed the ability to traverse a user's friends as part of the test app and to post to a defined audience of friends, as well as to the news feed. The presentation was false and misleading because the functionality being demonstrated was slated for removal with respect to most of the apps on Facebook's Platform. Developers who viewed presentations like the one at the Developer Day conference would be allowed to build their entire business on functionality that Facebook knew it planned to remove.



- (g) In a June 26, 2013 video posted on Facebook's YouTube page for developers, Facebook touted the work done by one of its partners, Fab.com, which again demonstrated Friends and News Feed API functionality that was slated for removal. The video features a Fab.com employee stating that using the Graph API, they were able to "take everything they have in the catalog and narrowly target to a customer" to "see a product on Facebook and then share with their friends." Again, Facebook

omitted that it was planning to remove the very APIs that made the featured functionality possible and did so because revelation of the truth would have prematurely ended its anticompetitive scheme before it could be completed.

(h) Facebook was consistently misleading about the functionality available to developers through the News Feed and Friends APIs. On June 20, 2013, Simon Cross, in a training video published on Facebook’s YouTube Channel, entitled “Getting Started with Graph API,” presented “[a]n introduction to Facebook’s Graph API which is the primary way to programmatically integrate with Facebook—publishing Open Graph stories, reading data about the current user—their details, their likes and interests and friends.” The video referenced Facebook’s posted developer documentation, and notably featured the following false and misleading statements about the functionality provided by the Graph APIs, including the Friends and News Feed APIs:

Graph API Explorer make it really easy to get started . . . Placed, Pages, Photos, Events and News Feed stories as well as Users are all considered objects in the graph . . . . We can go deeper and deeper into the graph. We can also request the picture connection on each returned User object. This would allow me to show the profile picture of each of my friends and to get all of this data in a single request.

452. These statements identified above were false and misleading not only because they were designed to induce developers to build for functionality that was slated for selective removal, but because the statements maintained the secrecy needed for the anticompetitive scheme’s success. Facebook knew that if developers found out the truth, they would flee the Platform and cease making apps that increased the value of Facebook. Without the proliferation of apps on its Platform, Facebook could not choose the “winners” among them for continued access while eliminating any actual or potential competitors when it eventually removed the APIs.

453. These false statements from the end of 2011 through the removal of the APIs in April 2015 created a clear duty to speak fully and truthfully. When Facebook finally announced

1 and purported to remove the APIs, it breached that duty, preventing developers from learning the  
2 true reasons for the purported removal of the APIs.

3 **B. Facebook and Its Employees Maintained a Code of Silence about the APIs**  
4 **and the Scheme in the Face of a Duty to Speak.**

5 454. Facebook senior executives, including Mark Zuckerberg, acted internally to ensure  
6 that the purported removal of the APIs, the reasons for the purported removal, and the overall  
7 anticompetitive scheme was kept a secret.

8 455. For example, when Facebook senior executives began plans to announce  
9 Zuckerberg's decision to remove the APIs and to enforce reciprocity, Zuckerberg vetoed the  
10 decision in December 2012.

11 456. When Sukhar raised the need to inform developers of Facebook's internal plans for  
12 the APIs—namely, their removal for competitive reasons—Vernal told him that any mention of  
13 the competitive reasons for the purported removal would mean a “high likelihood of breaking into  
14 jail.” Sukhar did not at any point reveal the truth to developers, even though he internally observed  
15 that he had been speaking to dozens of developers “who will get totally fucked by this and it won't  
16 even be for the right reason.” In fact, he acquiesced to the scheme, referring to it as the “switcharoo  
17 plan” when speaking to other Facebook engineers.

18 457. Facebook's George Lee raised the fact that Facebook was continuing to mislead  
19 developers about the APIs, even on the eve of the announcement of their purported removal, stating  
20 to Purdy and Vernal that “partner managers are still selling products that we ask them to sell, so  
21 when it comes to feed integration, we're still telling people to use [Open Graph].” He noted that  
22 Facebook had “decided amongst ourselves that this is no longer the future” but that developers  
23 were being told something different. Vernal, Purdy, and Lee all knew that Facebook was going to  
24 purport to remove the Friends and News Feed APIs, but none of them stopped Facebook from  
25 telling developers otherwise. These systematic and knowingly false statements to developers  
26 created a duty to speak fully and truthfully, but Facebook never did so.



1           458. All of this conduct instilled in Facebook’s employees a need for secrecy. Even  
2 when they raised issues with their superiors, none of them would correct the systematic false  
3 statements Facebook was making to developers contemporaneously with their internal execution  
4 of the scheme to remove the APIs for competitive reasons, including the internal audit of apps.  
5 They failed to correct those statements notwithstanding that their false statements about the  
6 Platform and its available functionality created a duty to speak fully and truthfully. For example,  
7 as described fully above, in internal e-mails to other Facebook executives and employees, Sukhar  
8 recounted conversations with developers during which he did not disclose the truth about the APIs.

9           **C. Facebook Lied to Developers About the Reasons for the Purported Removal,**  
10           **Offering False, Misleading, and Pretextual Reasons Instead of the Truth.**

11           459. At the April 30, 2014 Facebook F8 developers conference, Facebook misleadingly  
12 downplayed the announcement of its purported removal of the APIs by folding it into its  
13 announcement of new Facebook authentication features, including changes to Facebook’s Login  
14 system. Zuckerberg never mentioned during his keynote or any time during the conference that the  
15 most central APIs on the Platform, the Friends and News Feed APIs, were purportedly being  
16 removed. Instead, the announcement was buried at the bottom of an FAQ released during the  
17 conference. The FAQ falsely stated that “we are removing several rarely used API endpoints; visit  
18 our changelog for details.”

19           460. The statement was false because Facebook had internally surveyed the apps relying  
20 on the APIs and found that thousands of them relied on those APIs. They were not in any sense  
21 “rarely used.” The false statement was made to avoid drawing attention to Facebook’s radical  
22 decision to announce the purported removal of the Friends and News Feed APIs. By making a  
23 false statement about the reasons for the purported removal of the APIs, Facebook assumed a duty  
24 to speak fully and truthfully on the subject. It did not do so.

25           461. Facebook’s announcement of the purported removal of the Friends and News Feed  
26 APIs was deliberately designed to mislead, as it was announced as part of a broader Facebook  
27 Login announcement that was supposedly intended to increase user control over data. Indeed, in a  
28

1 blog post made on the day of the announcement, Facebook’s Jeffrey Spehar stated that the changes  
2 were made because “people want more control over sharing their personal information” and  
3 because “[w]e’ve heard from people that they’re often surprised when a friend shared their  
4 information with an app.”

5 462. Facebook never mentioned that it had internally audited apps to determine whether  
6 they were competitive and that senior executives had internally stated that the decision was being  
7 driven by competitive reasons, not legitimate business or technical reasons. Indeed, Facebook  
8 never mentioned that its own engineers thought the removal of the Friends and News Feed API  
9 was beyond parody and “insane.” The statements about user feedback as the reason for the decision  
10 were pretextual and misleading.

11 463. Between the announcement and the removal of the APIs in April 2015, Facebook  
12 continued to make false and misleading statements and omissions about the purported removal of  
13 the APIs, including about the reasons for the purported removal.

14 464. For example, Facebook told developers who inquired that the APIs were “going  
15 away.” Indeed, Konstantinos Papamiltiadis told developer Airbiquity on March 30, 2015, precisely  
16 this: “there are certain things that are going away on 4.30 that we can’t provide extensions for,”  
17 naming the Friends and News Feed APIs explicitly in an e-mail to Airbiquity’s product manager.  
18 At no time did Papamiltiadis or anyone else at Facebook tell the full truth—that it was secretly  
19 making deals with countless developers it had hand selected for continued use in exchange for  
20 their social data and other compensation.

21 465. On March 30, 2015, Papamiltiadis also told Microsoft the same thing: that the APIs  
22 were going away after April 30, 2015. Again, he never mentioned that in fact Facebook had made  
23 secret deals with certain developers.

24 466. These statements indicate that Facebook’s statements were broad and systematic,  
25 designed to mislead developers into thinking that it had evenhandedly applied its policy to all  
26 developers alike. If the truth were known, developers would have not only complained but would  
27

1 have pursued the true reasons for the purported withdrawal, which is why Facebook was careful  
2 to make false statements to developers who it had not selected for continued use.

3 467. Even in a blog post from April 30, 2015, the date the APIs were purportedly  
4 removed, Facebook claimed that “Facebook is migrating all apps to v2.0 of the Graph API with  
5 the goal of giving people more control over the information they share with apps.” That was not,  
6 however, the goal of the purported API withdrawal. Facebook had internally made the decision for  
7 competitive reasons and had no legitimate technical or business justification for the decision.  
8 Indeed, documents during the several years Facebook and its senior executives planned and  
9 executed the scheme reflect that the APIs were being purportedly withdrawn for competitive  
10 reasons, not for increasing user control over shared information.

11 468. Facebook continued to mislead developers by offering a pretextual reason for the  
12 purported withdrawal of the APIs. Simon Cross frequented developer message boards, including  
13 Stack Overflow, and referred developers asking questions about the APIs to Facebook’s  
14 documentation and FAQ. The FAQ stated:

15 Why are you deprecating the permissions to get information about  
16 people’s friends?

17 To put people first. This update was in response to feedback from  
18 people who were uncomfortable knowing that a friend could share  
19 their information with an app. With Graph API v.2.0, we wanted to  
20 make sure the people had more control over their information.

21 469. The reasons offered by the FAQ were false and misleading and omitted material  
22 information. Namely, the FAQ’s statement that the purported removal of the APIs was in response  
23 to user feedback was false and mere pretext designed to mislead developers as to the real reasons  
24 for the purported withdrawal of the APIs. Facebook had made the decision approximately three  
25 years earlier as part of Zuckerberg’s mandate that a policy of reciprocity be enforced as to  
26 developers and that competitive apps be prevented from using Facebook’s APIs. Indeed, Facebook  
27 had used information gleaned from spying on users to measure their engagement with apps and  
28 also performed an internal audit to determine which apps were competitive or potentially

1 competitive with Facebook so that they could be marked for destruction. Facebook's internal  
2 executives, including Sukhar, lamented that the purported removal of the APIs was not based on  
3 any legitimate technical reason, and Facebook's own engineers opposed the decision. None of  
4 these executives and employees contemporaneously cited user feedback as even a purported reason  
5 for the removal of the APIs.

6 470. Moreover, by speaking partially, falsely, and misleadingly about the reasons for the  
7 purported API withdrawal, Facebook was under a duty to speak fully and truthfully on the subject.  
8 It did not do so. Instead, it omitted (a) that the plan to purportedly deprecate the APIs had been  
9 made years prior to the announcement by senior executives, (b) that the reasons for the purported  
10 removal were competitive, not because of user feedback, and (c) that Facebook had hand selected  
11 certain apps for continued use of the APIs. Indeed, Facebook not only omitted that it was broadly  
12 entering into extended API agreements, it made false and misleading statements to the contrary in  
13 the FAQ, including that "[w]e've removed access to friends data in v.2.0" without any mention of  
14 the extended API agreements it was entering with certain app developers.

15 471. The announcement, FAQ, documentation, and posts to developer message boards  
16 mislead members of the putative class, including Plaintiffs, who frequented those sources of  
17 information as a matter of course. These developers, including, for example, Plaintiffs Reveal Chat  
18 and Beehive, accepted the pretextual reason for the purported API removal after reading the  
19 documentation posted after the announcement. If they had known the truth, they would have  
20 inquired further into the real reasons for the withdrawal, but Facebook's false statements  
21 successfully prevented any further inquiry.

22 472. Facebook was careful even when it referenced the purported April 2015 withdrawal  
23 of the Friends and News Feed APIs to continue to offer a false, misleading, and pretextual rationale  
24 for the decision. Indeed, when Facebook announced additional Platform changes on March 26,  
25 2018, senior executive Ime Archibong referenced the purported API withdrawal and an  
26 investigation into apps that had access to a large amount of information before the purported  
27

1 withdrawal, all as part of a broader initiative to prevent “misuse” of user data and to implement  
2 “additional measures to protect data” and give “people more control of their information.” That  
3 was not, however, the real reason for the purported withdrawal of the APIs in April 2015, and  
4 Facebook again failed to mention the real reasons for doing so despite undertaking a duty to speak  
5 fully and truthfully, including when it again spoke on the subject in March 2018.

6 473. Even after certain internal Facebook documents became public after the UK  
7 Parliament used its legal powers to seize them on November 24, 2018, Facebook continued to  
8 make false and misleading statements to conceal from developers the real reasons for the purported  
9 API withdrawal.

10 474. In a blog post by the company posted on December 5, 2018, Facebook stated falsely  
11 and misleadingly that extended API agreements to access the purportedly withdrawn APIs were  
12 granted to developers in the “short term” and “only used to prevent people from losing access to  
13 specific functions as developers updated their apps.” The blog post also stated that the changes to  
14 the APIs were made to prevent the improper access to user data that occurred as part of the  
15 Cambridge Analytica scandal. That was not, however, the reason Facebook purported to remove  
16 the APIs. In fact, Facebook continued to allow broad access to user data for hand-selected apps  
17 that entered into agreements with Facebook to provide their social data back to Facebook or  
18 provide other compensation, such as large advertising purchases.

19 475. On November 6, 2019, NBC News posted the full trove of documents seized by the  
20 UK Parliament on its website. For the first time, Facebook’s statements were revealed to have been  
21 false, misleading, or having omitted material information. This was the first time any developer  
22 could have learned the real reason for the purported withdrawal of the APIs—competitive reasons.  
23 It was also the first time developers could learn (1) that Facebook internally viewed the purported  
24 withdrawal as lacking any legitimate business or technical justification, and (2) that the scheme  
25 had broad impact on competition.

**D. Plaintiffs Exercised Reasonable Diligence with Respect to their Claims.**

476. As described with respect to each Plaintiff in the section above concerning the parties, each Plaintiff exercised reasonable diligence as to their claims and none of them could have known that Facebook's reasons for removing the APIs were false, pretextual, and that the decision to remove the APIs lacked any legitimate business or technical justification. The facts are set forth here again briefly and in summary (please refer to each section on the Plaintiffs above for a more detailed description):

- Plaintiff Lenddo contacted Facebook for an exemption and was told in May 2015, including by Facebook's Simon Cross, that its product would not receive one because it was a lending and financial services app. As described above, that proffered reason was false and misleading, as the NBC documents published in 2019 revealed that other financial services companies, such as Royal Bank of Canada, had received an exemption in exchange for advertising purchases. Lenddo exercised additional diligence, including by speaking with other developers and reading documentation and posts by Facebook. Lenddo could not have known that the reasons provided to it by Facebook were false and misleading until internal Facebook documents revealed otherwise in December 2019.
- Plaintiff RevealChat contacted Facebook after the API withdrawal and was referred to false and misleading documentation and policy documents, including Facebook's documentation suggesting that the APIs were removed for user privacy and control reasons. Those reasons were pretextual, and Facebook reiterated them, including in subsequent Platform announcements. RevealChat also searched out, read, and relied upon false and misleading statements in a December 2018 blog post by Facebook responding to documents made public by the UK Parliament that suggested that the APIs were removed for user privacy and control reasons, such as those raised by the events surrounding Cambridge Analytica. RevealChat accepted the pretextual statements about user privacy and control until those statements become wholly

1 implausible upon the release of the internal Facebook documents by NBC News in  
2 November 2019.

- 3 • Plaintiff Beehive sought an exemption from Facebook after the APIs were removed in  
4 April 2015, but did not receive a response from Facebook. Beehive then contacted an  
5 acquaintance at Facebook who said the app would not receive an exemption. Despite  
6 having assumed a duty to speak fully and truthfully when Facebook had made prior  
7 false and misleading statements, including when it falsely stated that it was removing  
8 the APIs because they were rarely used, the Facebook employee that spoke to Beehive  
9 misleadingly omitted the real reason for the withdrawal. Beehive then read, and relied  
10 upon Facebook's statements, including in its 2015 posts and announcements,  
11 suggesting that the APIs were removed for user privacy and control reasons. Those  
12 statements also misleadingly omitted the truth. Beehive accepted that pretextual  
13 explanation. It was not until Facebook's documents made clear in November 2019 that  
14 Facebook's stated reasons for removal of the API were pretextual that Beehive learned  
15 the truth.

#### 16 **CLASS ACTION ALLEGATIONS**

17 477. The class's claims all derive directly from a course of conduct by Facebook.  
18 Facebook has engaged in uniform and standardized conduct toward the class. Facebook did not  
19 materially differentiate in its actions or inactions toward members of the class. The objective facts  
20 on these subjects are the same for all class members. Within each Claim for Relief asserted by the  
21 class, the same legal standards govern. Accordingly, Plaintiffs bring this lawsuit as a class action  
22 on their own behalf and on behalf of all other persons similarly situated as members of the  
23 proposed class pursuant to Federal Rules of Civil Procedure 23(a) and (b)(3) and/or (b)(2) and/or  
24 (c)(4). This action satisfies the numerosity, commonality, typicality, adequacy, predominance, and  
25 superiority requirements of those provisions.

**The Nationwide Developer Class**

478. Plaintiffs bring this action and seek to certify and maintain it as a class action under Rules 23(a); (b)(2); and/or (b)(3); and/or (c)(4) of the Federal Rules of Civil Procedure on behalf of themselves and a Nationwide Developer Class defined as follows:

All persons, entities, corporations in the United States who were excluded from the Social Data Market or injured by Facebook’s decision to withdraw the Graph APIs, for the period beginning May 24, 2010 until April 30, 2015 (the “Class Period”).

479. Excluded from the Nationwide Developer Class is Facebook, its employees, officers, directors, legal representatives, heirs, successors, and wholly or partly owned subsidiaries or affiliates; and the judicial officers and their immediate family members and associated court staff assigned to this case.

**Numerosity and Ascertainability**

480. This action satisfies the requirements of Fed. R. Civ. P. 23(a)(1). There are tens of thousands of developers nationwide and throughout the world that relied on Facebook’s Open Graph API during the Class Period. Individual joinder of all Class members is impracticable.

481. The Class is ascertainable because its members can be readily identified using API tokens, developer registrations, and other records and information kept by Facebook or third parties in the usual course of business and within their control. Plaintiffs anticipate providing appropriate notice to the certified Class, in compliance with Fed. R. Civ. P. 23(c)(1)(2)(A) and/or (B), to be approved by the Court after class certification, or pursuant to court order under Fed. R. Civ. P. 23(d).

**Predominance of Common Issues**

482. This action satisfies the requirements of Fed. R. Civ. P. 23(a)(2) and 23(b)(3) because questions of law and fact that have common answers that are the same for the Class predominate over questions affecting only individual Class members. These include, without limitation, the following:



- a. Whether Defendant monopolized the Social Data Market.
- b. Whether Defendant, its employees or affiliates, intended to monopolize the Social Data Market.
- c. Whether Defendant attempted to monopolize the Social Data Market.
- d. Whether Defendant possessed monopoly or market power in the Social Data Market.
- e. Whether user data and data obtained by third parties created a Social Data Barrier to Entry that protected Facebook's market position and/or monopoly, reduced competition or entry in the Social Data Market, and/or increased prices for products in that market, including, but not limited to, advertising and API access.
- f. Whether Defendant's decision to withdraw the Friend and Feed Graph APIs lacked any justification and/or whether the procompetitive effects of the decision to do so, if any, was outweighed by the anticompetitive effects.
- g. Whether Defendant sacrificed short-term profits to monopolize, or attempt to monopolize, the Social Data Market.
- h. Whether the procompetitive effects of the decision to withdraw the Friend and Feed Graph APIs, if any at all existed, could have been accomplished by less restrictive means.
- i. Whether Defendant's agreements with whitelisted developers violated Sections 1 and 2 of the Sherman Act, including whether the agreements restrained trade or strengthened the Social Data Barrier to Entry.
- j. Whether Defendant's purchase of WhatsApp violated Sections 2 of the Sherman Act.
- k. Whether Defendant's conduct harmed competition in the Social Data Market.
- l. Whether Defendant's conduct caused price increases or the reduction of consumer or developer choice in the Social Data Market.
- m. Whether Defendant's unlawful conduct was a substantial contributing factor in the injury to members of the Class.

**Typicality**

483. This action satisfies the requirements of Fed. R. Civ. P. 23(a)(3) because Plaintiffs' claims are typical of the claims of other Class members and arise from the same course of conduct by Defendant. The relief Plaintiffs seek is typical of the relief sought for the absent Class members.

**Adequate Representation**

484. Plaintiffs will fairly and adequately represent and protect the interests of the Class. Plaintiffs have retained counsel with substantial experience in prosecuting consumer class actions, including actions involving defective products.

485. Plaintiffs and their counsel are committed to vigorously prosecuting this action on behalf of the Class and have the financial resources to do so. Neither Plaintiffs nor their counsel have interests adverse to those of the Class.

**Superiority**

486. This action satisfies the requirements of Fed. R. Civ. P. 23(b)(2) because Defendant has acted and refused to act on grounds generally applicable to the Class, thereby making appropriate final injunctive and/or corresponding declaratory relief with respect to the Class as a whole.

487. This action satisfies the requirements of Fed. R. Civ. P. 23(b)(3) because a class action is superior to other available methods for the fair and efficient adjudication of this controversy. The common questions of law and fact regarding Defendant's conduct and responsibility predominate over any question affecting only individual Class members.

488. Because the damages suffered by each individual Class member may be relatively smaller than the costs of litigation, the expense and burden of individual litigation would make it very difficult or impossible for individual Class members to redress the wrongs done to each of them individually, such that most or all Class members would have no rational economic interest in individually controlling the prosecution of specific actions, and the burden imposed on the

1 judicial system by individual litigation by even a small fraction of the Class would be enormous,  
2 making class adjudication the superior alternative under Fed. R. Civ. P. 23(b)(3)(A).

3 489. The conduct of this action as a class action presents far fewer management  
4 difficulties, far better conserves judicial resources and the parties' resources, and far more  
5 effectively protects the rights of each Class member than would piecemeal litigation. Compared  
6 to the expense, burdens, inconsistencies, economic infeasibility, and inefficiencies of  
7 individualized litigation, the challenges of managing this action as a class action are substantially  
8 outweighed by the benefits to the legitimate interests of the parties, the court, and the public of  
9 class treatment in this Court, making class adjudication superior to other alternatives, under Fed.  
10 R. Civ. P. 23(b)(3)(D).

11 490. Plaintiffs are not aware of any obstacles likely to be encountered in the management  
12 of this action that would preclude its maintenance as a class action. Rule 23 provides the Court  
13 with authority and flexibility to maximize the efficiencies and benefits of the class mechanism and  
14 reduce management challenges. The Court may, on motion of Plaintiffs or on its own  
15 determination, certify nationwide, statewide, and/or multistate classes for claims sharing common  
16 legal questions; utilize the provisions of Rule 23(c)(4) to certify any particular claims, issues, or  
17 common questions of fact or law for class-wide adjudication; certify and adjudicate bellwether  
18 class claims; and utilize Rule 23(c)(5) to divide any class into subclasses.

#### 19 **REALLEGATION AND INCORPORATION BY REFERENCE**

20 491. Plaintiffs reallege and incorporate by reference all the preceding paragraphs and  
21 allegations of this Complaint, as though fully set forth in each of the following Claims for Relief  
22 asserted on behalf of the Class.

**CLAIMS FOR RELIEF**

**COUNT I**

**SECTION 2 SHERMAN ACT:  
MONOPOLIZATION**

492. Defendant has willfully acquired and maintained monopoly power for Facebook in the relevant markets for Social Data and Social Advertising.

493. Facebook possesses monopoly power in the relevant markets for Social Data and Social Advertising. Facebook has the power to control prices or exclude competition in the relevant markets.

494. Since at least as early as 2010, Facebook has occupied a dominant position in the Social Data Market, with a user share worldwide during the relevant period of more than 60% of users on comparable social networks when user shares of its WhatsApp, Instagram, Facebook, and Messenger products are aggregated. As of October 2019, Facebook controlled approximately 66% of worldwide users in the Social Data Market.

495. Facebook's revenue share of the Social Advertising Market is approximately 80%; its share has been above 70% since 2015.

496. Defendant has willfully acquired and maintained monopoly power for Facebook in the relevant markets for Social Data and Social Advertising. As alleged herein Defendant has accomplished this by means of predatory, exclusionary, and anticompetitive conduct, including but not limited to: removing friends, news feed, and other crucial APIs; refusing to sell social data to competing applications developers; extracting social data from competitors through threats of blacklisting and/or through nonconsensual data scraping; targeting competitors for reciprocity or denial of API access; entering into whitelisting and data sharing agreements with competitors; and engaging in covert surveillance of competitors' users in order to detect and ultimately acquire competitive threats before they became too formidable.

497. Defendant's conduct alleged above has had an anticompetitive effect in the relevant markets for Social Data and Social Advertising.



508. Plaintiffs and the Nationwide Developer Class have been and will be injured in their business or property as a result of Defendant's conduct alleged herein.

509. Plaintiffs and the Nationwide Developer Class have suffered and will suffer injury of the type that the antitrust laws were intended to prevent. Plaintiffs and the Nationwide Developer Class have been and will be injured by the harm to competition as a result of Defendant's conduct.

## PRAYER FOR RELIEF

WHEREFORE, Plaintiffs request that judgment be entered against Defendant and that the Court grant the following:

- A. Determine that this action may be maintained as a class action pursuant to Rules 23(a), (b)(2), (b)(3) and/or (c)(4) of the Federal Rules of Civil Procedure, and direct that reasonable notice of this action, as provided by Rule 23(c)(2), be given to the Class, and declare Plaintiffs as the representatives of the Class;
- B. Enter a judgment against Defendant in favor of Plaintiffs and the Class;
- C. Award the Class damages (i.e., three times their damages) in amount to be determined at trial;
- D. Award actual, compensatory, statutory, and consequential damages;
- E. Award equitable monetary relief, including restitution and disgorgement of all ill-gotten gains, and the imposition of a constructive trust upon, or otherwise restricting the proceeds of Defendant's ill-gotten gains, to ensure an effective remedy;
- F. Grant permanent injunctive relief pursuant to Section 16 of the Clayton Act to remedy the ongoing anticompetitive effects of Defendant's unlawful conduct;
- G. Award pre-judgment and post-judgment interest at the highest rate allowed by law;
- H. Award Plaintiffs and the Class their costs of suit, including reasonable attorneys' fees as provided by law; and

I. Award such further and additional relief as the case may require and the Court may deem just and proper under the circumstances.

**JURY DEMAND**

Plaintiffs demand a trial by jury on all claims so triable as a matter of right.

Dated: August 8, 2020

Respectfully submitted,

/s/ Brian J. Dunne

**Brian J. Dunne** (SBN 275689)  
bdunne@bathaeedunne.com  
**BATHAEE DUNNE LLP**  
653 West Fifth Street, 26th Floor  
Los Angeles, CA 90071  
(213) 462-2772

/s/ Yavar Bathaee

**Yavar Bathaee** (SBN 282388)  
yavar@bathaeedunne.com  
Edward M. Grauman (*pro hac vice*)  
egrauman@bathaeedunne.com  
**BATHAEE DUNNE LLP**  
445 Park Ave. 9th Floor  
New York, NY 10022  
(332) 205-7668